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THE JOURNAL OF
OPHTHALMOLOGY
OTOLOGY AND LARYNGOLOGY.

ISSUED BI-MONTHLY

JOHN L. MOFFAT, M. D., EDITOR.

ASSOCIATE EDITOR :

A. WORRALL PALMER, M. D.

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ALPHABET

THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

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EDITORIAL.

WITH the new century the JOURNAL inaugurates a new era in its history: becoming a bi-monthly, enlarging its editorial staff, adding new departments, and aiming to interest the general practitioner as well as the specialist and the exclusivist.

Of course, success depends primarily upon the co-operation of writers who are workers in the specialties of the eye, ear, nose, and throat. The unexpectedly large number of kindly letters expressing cordial sympathy that we have received encourage us in our belief that the new departure will prove all the success that we anticipate.

Undoubtedly there are too many medical journals now in existence, but this is not one of those. We propose to offer our readers, every second month, papers written especially for us or read before societies—papers preferably, but not necessarily short, which present original work, thought, research, and observation, and also short practical papers that the general practitioner will not deem over his or her head.

Abstracts of original papers in current literature will be given each month, and special efforts will be made to give

early abstracts of the valuable papers read at society meetings, with their discussions when practicable.

A new feature of the JOURNAL, which we trust will be of value, is a bibliography of the current literature of the world in our specialties.

Circumstances over which we have no control, and which we deeply deplore, have delayed the appearance of the early numbers of this year's volume. Each number will follow as rapidly as possible until we shall have caught up to the schedule.

As soon as our abstracting and bibliographical departments are sufficiently organized and we are in receipt of enough original articles, the JOURNAL will be published monthly.

The sympathy of all his friends goes out to Dr. Deady for the illnesses which have so distracted him as to necessitate laying down the burden of this editorship. It will be our ambition to carry forward the standard which he took from the relaxed grasp of the founder—our esteemed teacher, the late Dr. George S. Norton.

In justice to our associate, credit should be given Dr. Palmer for much of the work involved in the reorganization of the JOURNAL and for one at least of the new departures. He will assist the Editor in the conduct of the ear department, in addition to looking after those of the nose and throat. All ear publications which make a group of the ear, nose, and throat should be sent directly to him.

ASTIGMIA.

ONE important duty of the journalist, as well as of writers of text-books and of every member of our "learned profession," is to be as scholarly as possible. With this in

mind, we shall continue to urge the adoption of the more scholarly and more correct terms *astigmia* and *astigmatic* instead of astigmatism and astigmatic, and shall make this substitution in editing MSS. for the JOURNAL.

In 1895 Dr. Georges Martin * called attention to Rev. Dr. Whewell's error when the latter coined the term astigmatism: instead of basing the new word upon the Greek *στιγμα*, *ατις*, which means a point in the sense of a prick, he should have derived it from *στιγμα*, *ης*, meaning a mathematical point. From this, with *α* privative, *astigmia* comes, as *aphonia* comes from *α* and *φωνη*, *ης*.

AMERICAN INSTITUTE OF HOMEOPATHY.

THE Executive Committee announces that the next meeting, June 18, 1901, will be held at RICHFIELD SPRINGS, NEW YORK. The postal vote about changing the place was: Niagara Falls, 281; Richfield Springs, 569; Montreal, 56; Cambridge Springs, 27; blanks 36. No expression of opinion from so large a number of the Institute members on any given subject has ever before been so obtained.

CORRECTION.—Last month's article by Dr. Fred D. Lewis, "The Progress in Laryngology and Rhinology during the Last Half Century," should have been credited as read at the Jubilee Meeting of the New York State Homeopathic Medical Society in Brooklyn, September, 1900.

* *Annales d'Oculistiques*, December.

GOUT AND RHEUMATISM OF THE EAR.

S. S. KEHR, M. D.

Sterling, Ill.

NOT until recently have otologists attributed any importance to gout and rheumatism as an ætiological factor in ear diseases. A certain amount of doubt must surround some cases on account of the difficulty of establishing the existence of gout or rheumatism in the individual having a hereditary diathesis. Gout and rheumatism exert a greater influence upon the organ of hearing than is usually supposed. It is not necessary that the patient shall ever have had an acute attack of rheumatism. The auditory apparatus being affected primarily, on the subsidence of the aural inflammation the nature of the disease will be seen by rheumatism of one or more of the large joints of the body. In gouty patients we usually find well-marked evidences of the disease elsewhere before the ear becomes affected, although the hereditary form may show itself only in the ear for a considerable period. The ear may become secondarily involved by the extension of the disease from the pharynx and tonsils.

Rheumatism partakes of two forms, acute and chronic; the ear may be involved by both varieties. The acute form affects the joints mainly; frequently ushered in by a chill, fever and sweat, pain in joints, a coated tongue, loss of appetite; scanty, high-colored urine which leaves a red deposit on cooling; hyperæmia and swelling of synovial membrane and the ligamentous tissue; the fluid lubricating the joint becomes turbid; albumin and fibrin being present in

increased amount. In the chronic rheumatic affections of the joints there are stiffness and pain in the joints, barometric in character. Synovial fluid is diminished in amount, the cartilages are thickened, the sheaths of the tendons at the joint undergo similar involvement, restricting the movement of the joint and neighboring muscles. The nerves supplying the parts undergo pathological changes, atrophy of the affected parts resulting from lack of proper nutrition; a slowly developing sclerosis of the blood vessels adds another change to the part involved.

In gout we find an excess of uric acid in the parts directly involved by the disease. There are the familiar involvement of the metatarso-phalangeal joint of the great toe and changes in other joints; pains in joints with inflammation, hyperæmia, swelling of the ligamentous tissue with effusion into the joint, migraine, uncertainty of temper with insomnia, mental depression, disturbance of the digestive tract, lumbago, neuralgia, spasms of the calves, early atheroma of the blood vessels.

The histological structures of the auricle and external auditory canal are composed of a large amount of fibrous tissue and cartilage, the two tissues which are peculiarly susceptible to the morbid influences of gout and rheumatism. The membrana tympani is made up of three layers, the external being a continuation of the modified skin of the auditory canal; the middle layer is fibrous, with its fibers arranged both circularly and radially; and the third or internal layer is mucous membrane continuous with that which lines the eustachian tube and middle ear, which is closely adherent to the bony walls, and in part replaces the periosteum, and with numerous folds divides the cavity into a number of secondary spaces. The middle ear is a double cavity, the antrum and the attic, divided by a horizontal line through the short process of the malleus, the former lying below the line and the latter above it. Lying across the tympanic cavity are the ossicles with their minute and complicated system of articulations: the stapes with the fenestrum ovale, the incus with the stapes and malleus,

and the malleus with the incus, membrana tympani, and wall of the tympanic cavity. The inner ear needs consideration of the blood vessels only: the auditory artery, a branch of the basilar, and the basilar of the vertebral and the vertebral from the subclavian. It accompanies the auditory nerve to the internal ear, where it divides into two branches; the one supplying the vestibule and semicircular canals, the other supplying the cochlea.

There is no part of the ear—external, middle, or internal—but that can be affected directly or indirectly by gout or rheumatism. The tissues of the auricle and external auditory canal are more frequently affected by gout than by rheumatism. Rheumatism more frequently affects the periosteum of the tympanic cavity and membrana tympani. The internal ear and auditory nerve are very rarely affected; the blood vessels suffer more frequently. The same toxic causes which produce well-known ordinary symptoms of gout produce otalgia, which does not differ in its symptoms from ordinary earache except that the pain is more intense in the “small hours” of the night. The pain and constitutional symptoms are out of proportion to the local lesion.

Involvement of the ear from both affections occurs most often in advanced life and in males; especially so as regards the serous form of otitis. The chronic sclerotic variety of middle-ear diseases dependent upon rheumatism is not seen at any definite age, occurring most frequently in the female sex, and is associated with muscular rheumatism. Acute inflammation of the membrana tympani, having for its cause acute rheumatism or gout, occurs at any time, age, and in either sex. Destruction of the middle and internal ear occurs most frequently in males and at an advanced period of life, the patient suffering from a rheumatic or gouty diathesis a number of years before the ear becomes involved. Objectively and subjectively, gouty and rheumatic affections differ when various parts of the auditory apparatus are affected. In the large proportion of patients suffering from well-marked gout, liability to occasional sub-acute dermatoses of the meatus is observed.

Chalkstones may be found in gouty persons in the upper part of the pinna, first appearing as a small vesicle under the skin of the helix; its contents at first are opalescent or milky, afterwards becoming white, opaque, and thick like cream. Later the vesicle assumes the appearance of a hard, white bead resembling a pearl. They do very little harm.

Persistent eczema of the auricle and auditory canal is frequently met with in the gouty and rheumatic diathesis, but may be of such a mild form that the attention of the patient is scarcely called to it, but it is very resistant to treatment and leading to changes in the cutaneous lining. This condition of the canal may favor the development of vegetable parasites. Either the diffuse or circumscribed inflammation of the canal is frequently the result of the arthritic diathesis. Exostosis of the auditory canal is frequently the consequence of gout or rheumatism.

Adults or children predisposed to, or affected with, gout or rheumatism may have acute or chronic suppuration, or non-suppurative inflammation, of the middle ear. In the acute form the pain is intense in the affected ear; paroxysmal in nature and affecting the entire side of the head and neck; tinnitus, slight at first, but increasing as the condition advances. The membrana tympani is intensely red. There are deafness and a feeling of stiffness in the ears.

The membrana tympani is rarely affected without the middle ear at the same time being involved.

It has been questioned whether the calcareous deposits found in the malleo-incudal joint are not of uric-acid diathesis. Sclerosis has been attributed to progressive arthritis deformans.

Long-continued rheumatism, particularly in old people, exerts a marked degree of degeneration of the arterial walls throughout more or less of the entire arterial system. The vessels become rigid by the deposit of lime in their walls, thus weakening them and narrowing their caliber so that a sudden increase in blood pressure will produce rupture. By the destruction of one of these small vessels in the laby-

rinth, hemorrhage is produced. The patient complains of irregular subjective forms of tinnitus with impaired hearing and vertigo, varying with the amount of destruction in the labyrinth. Vertigo of gouty people is almost always due to ear trouble. Tinnitus aurium of gouty origin is slow in developing, and, as a rule, the acuteness of hearing is not affected. The character of the sound varies as in ordinary tinnitus aurium ; during the night the sound is most marked.

The tendency to frequent recurrence of the symptoms and their chronicity are the most prominent characteristics in gout and rheumatism of this organ. The diagnosis of a gouty or rheumatic affection of the ear should not be made simply because we know of no other cause, or on account of the great pain, or of an arthritic diathesis ; but it will be necessary to prove that the same cause which produced the disease of the joint and serous membrane was also the cause of the disease of this organ. The prognosis will, of course, depend upon the original cause of the ear affection ; generally good in both gout and rheumatism, and depending upon the promptness with which treatment is instituted. Local treatment, except in acute inflammation, is of little value ; constitutional treatment, as in any arthritic affection, alone being of service.

THE DANGER FROM THE USE OF HOT WATER IN THE TREATMENT OF OTITIS MEDIA.

E. ELMER KEÉLER, M. D.

Syracuse, N. Y.

RECENTLY my attention has been directed to the complications liable to be produced by the long-continued use of hot water, either as a nasal douche, or through the external auditory meatus, in the treatment of the various forms of otitis.

During the last winter an unusually large number of cases of otitis came to my office after having been under indifferent medical care, or the friendly supervision of the wise woman of the family, who knows the only "sure cure" for each and every disease to which the human frame may be subjected. It was through these cases that the fact was made evident to me that hot water may be, when improperly used and long continued, the means of great injury.

In the majority of these cases hot water had been used *ad libitum*. As a nasal douche quarts had been forced through the nares, and gallons had been projected against the sensitive tympanum, with oftentimes considerable force, from syringes of various kinds. In one instance, the physician had directed the use of hot water through a fountain syringe elevated several feet above the head of the patient. This had been continued at intervals of a few hours for three weeks, on account of the local pain and tenderness.

The patient was then discharged as cured, but within a few days I was consulted on account of the pronounced

deafness. An examination revealed the meatus red, swollen, and nearly impervious the greater length of the canal. The watch could only be heard on contact, and distressing tinnitus was present.

When subsequent treatment had reduced the swelling, the tympanum was found to be perforated, and the part remaining softened and thickened.

From the history of the case it is a question whether the subsequent perforation would have occurred, had less moisture and heat been applied.

Late investigations seem to establish the fact that the staphylococcus albus is the *prima causa* of secondary involvement and chronic suppuration; and that these micro-organisms are constantly present in the external auditory canal, in the nasal fossæ, the mouth, and the pharynx. If this be true, what more fatal treatment can be advised than to apply any liquid with force in the canal or nares, if there be any possibility of an opening into the middle ear, either through the eustachian tube or the tympanum? And furthermore, will not the continued maceration to which the tympanum is subjected tend to weaken its fibers and cause an opening, if none previously existed? The moment such an opening exists the constant use of water affords means whereby any bacilli or foreign body may be forced directly into the middle ear, exciting and continuing suppuration. The use of the nasal douche has not been countenanced by the best authorities for many years, but is still made use of by many as a means of relief for ordinary "colds in the head."

This procedure has produced several severe cases of acute otitis, and I have found them especially difficult to cure. The reason for this, I believe, may be found in the fact that not only the solutions used were non-aseptic and perhaps were forced directly into the middle ear, but by their use the bacilli already present in the nasal cavity and productive of little harm were carried through the eustachian tube and gave rise to the acute otitis, which in turn may be complicated by subcutaneous abscess, purulent meningitis, and suppuration of the mastoid cells.

A word of caution should also be given, as has lately been pointed out by Burnett in the Philadelphia *Polyclinic*, regarding powerful inflation of the middle ear during suppurative disease, from the possibility of forcing fresh germs into the mastoid cells. If this may be done by inflation, surely it may follow forcible and prolonged irrigation.

In one case especially, occurring several years ago, do I now believe this to have been the cause; and I wish to briefly review the case and raise the query if the result might not have been different, had there been less use of hot water in its treatment. The patient was a woman of middle years, who consulted me with a history of chronic suppurative otitis, dating back to an attack of scarlatina in childhood. The only treatment had been to frequently syringe the ear with hot water. Several times tenderness of the mastoid had occurred, which had subsided under poultices. For several months prior to her visit pain and soreness had been constant, and I advised an immediate operation. I had the patient anæsthetized and opened the mastoid, finding pus both beneath the periosteum and more deeply imbedded in the cells. The wound was thoroughly irrigated with hydrogen peroxide (which found its way out through the external ear), packed with sterilized gauze, and in a few days all discharge ceased and the patient was discharged, with the hearing much improved. Within a few months she returned, with nearly the same history in the other ear. She stated that a few days previously the ear had "gathered and broke," and she had at once proceeded to syringe it for hours at a time, as it had eased the pain. I found the same indications of mastoid complication as before, and another operation was necessary.

At the time I did not connect the prolonged application of the hot water with this complication, but I am now led to believe that in either case the suppurative process may be carried from the middle ear by the constant stream poured into the external meatus.

Of course, hot sterilized solutions are frequently to be used to remove the discharge following an attack of otitis, the parts being then carefully dried with absorbent cotton; but the long-continued use of hot water can but soften the tissues, increase inflammation, induce local necrosis and possible mastoid involvement.

NOTE ON FERRUM PHOSPHORICUM IN AURAL HYPERÆMIA.

F. PARK LEWIS, M. D.,

Buffalo, N. Y.

A NOTE concerning the following case may not be without interest, as it demonstrates very clearly the value of a rightly chosen remedy acting dynamically in a condition for which local measures have generally proven altogether inadequate.

J. N. McC., aged forty-eight, a carpenter, somewhat more than a year ago was engaged in building a huge pickle tank. The work continued for several weeks, during which time he was subjected to the sound of almost continuous pounding for a number of hours daily. When his work was completed he found that he heard very imperfectly in the left ear, and an almost unbearable subjective ringing was ever present. This became finally so distressing that he was obliged to seek relief.

Examination disclosed the fact that the upper portion of the tympanic membrane, including the whole of Shrapnell's membrane, was of a dull red ; the remaining portion, having lost its brilliant reflex, was otherwise normal. Hearing distance for the watch was reduced to 2/60. The right ear showed a slight catarrhal condition, dry, a little dull, hearing slightly reduced, about 14/60. There was also a regular beating in the left ear, synchronous with the heart impulses.

It was evident that a congestion of the middle-ear structures had been excited by the repeated impact of the sound waves, and as the acoustic accommodation was probably already slightly limited, its elasticity was lessened and a direct traumatism had followed from "the blows of sound."

As the disturbance had been molecular it seemed wise to

meet it by administering a drug capable of producing a like condition when administered internally. Such a drug we find in ferrum phosphoricum. Under the toxic effects of this substance local congestions are prominent, especially those of the head, with beating in the ears, tinnitus, and diminished hearing. Schüssler, to whom we owe many valuable suggestions, says: "Anything causing a relaxation of the muscular walls of a vessel and consequent hyperæmia, such as an injury, finds its remedy in ferrum phos., as this remedy in minute doses restores the equilibrium of the iron molecules; thus strengthening the muscular fibers." Hering has suggested that, when molecular vibrations of like character meet, they follow the same laws within the living organism as do light waves of the same amplitude in general physics. Whatever be the theory the fact has been well substantiated, and in this special case the conclusion justified the premises.

Ferrum phos. was administered internally in the sixth decimal trituration, two grains three times daily. At the end of a week the tinnitus had noticeably decreased and the redness was materially lessened.

The second week showed little change; at the end of the third and fourth, however, the improvement was so marked that the drum membrane had almost resumed its normal character; conversation could be carried on in an ordinary tone of voice, and while neither ear, on the occasion of the last visit, had fully reached the normal by the artificial watch test, both had so much improved as to be in all probability as good as they had been before their injury.

As it is obviously impossible in any proving to carry the pathogenetic effect to organic tissue change, we can only take the symptomatology as indicative of the structural changes that would occur were the drug action continued.

The value of a verification of this character is thereby enhanced and its importance in a therapy so limited as that pertaining to the ear would seem to warrant its permanent record.

THE IMPORTANCE OF EARLY AND COMPETENT TREATMENT IN SUPPURATION OF THE MIDDLE EAR.

CHARLES DEADY, M. D.,

New York.

THE recent widespread epidemic of "la grippe," with its numerous and often obstinate aural complications, serves to excite renewed interest in this somewhat hackneyed, but ever important subject. While it is to be hoped and expected that we have passed the period in which cases of ear suppuration were regarded as affairs of small moment, receiving only a perfunctory attempt at treatment,—if, indeed, they were not entirely neglected in favor of the more important constitutional condition which happened to be co-existent with them,—it is still a fact that in many instances the necessity of immediate and sufficient remedial action is not fully recognized. It appears to the writer, as a result of experience, that cases of ear disease arising in the course of epidemics such as the one we have just passed through, and apparently dependent upon bacterial invasion, are more obstinate, virulent, and far-reaching in their effects upon the parts involved than are other cases of suppuration. There certainly seems to be a greater tendency to mastoid complication in these cases than is present in ordinary acute suppuration. Whether this be due to the action of the specific bacillus, or to the decreased resisting power of the patient resulting from the general prostration of the nervous forces, is a question; but if it be a fact, from whatever cause, it furnishes an excellent argument for the necessity of instant and expert care.

If we consider the facts that suppuration of the middle ear involves a cavity (tympanum and attic) which in its greatest diameter affords a space of only 15 mm., the other dimensions being much smaller; that its posterior wall is in direct connection with the mastoid cells, which are lined by the same membrane, and in which disease is propagated simply by continuity of tissue—these cells being separated on the inner side from the sigmoid fossa, containing the lateral sinus, only by a thin plate of bone; that the anterior wall of the tympanum is formed in part by the carotid canal, which contains minute foramina for the passage of branches of the sympathetic nerve; that the bony structure forming its median wall, and separating it from the internal ear, contains two openings, the foramen rotundum and the foramen ovale, beside the canal for the passage of the facial nerve; that the floor of the cavity is separated from the lateral part of the jugular fossa only by a thin plate of bone, which in some places is incomplete, and which always contains a foramen for the passage of the tympanic nerve, and that the bony plate constituting the roof, also very thin, and occasionally incomplete, forms a portion of the brain cavity and is covered by the dura mater, between which membrane and the mucosa of the middle ear intimate vascular relations exist in adult life, while in early childhood the petro-squamous suture, which runs along the roof of the tympanum and the mastoid antrum, is not yet closed and is lined by the dura mater, which, projecting through the open fissure, gives off processes which are in direct connection with the lining of the middle ear—if we properly consider these facts, it would seem that any inflammation having this cavity for its site, however slight, was a matter requiring the most careful attention.

Even under the most approved treatment many of these cases run a protracted course; the discharge disappearing for a short time, only to return if the patient is subjected to fatigue or when for any reason the vital forces become reduced. Especially is this the case if the patient be past

middle age, or where the constitutional disease has made a serious impression on the nervous forces. I have at present under treatment a patient who is a case in point. I have repeatedly stopped the discharge by means which are usually permanently efficacious, only to find it returning on the slightest provocation.

These cases, however, have usually existed for a certain time before the expert is consulted, and the point which is intended to be made here is that the general practitioner should be constantly on the watch for ear complications when treating a disease which is prone to produce them, and thus save the patient much time and often much suffering ; to say nothing of the possible danger of serious lesions later on. Every aural surgeon is familiar with the fact that a large number of the cases of chronic suppuration are referred to attacks of scarlet fever and measles, and undoubtedly the fact that they have become chronic is due to the want of efficient treatment.

In diphtheria the frequent absence of pain and the mildness of the attack in the beginning are often responsible for the fact that the physician is not always even aware of its presence, although this variety of the disease is often most virulent and destructive in its effects and may result in caries and necrosis of the bony parts.

One of the first indications in the treatment of any suppurating ear is absolute cleanliness. If the pus be removed as fast as it accumulates there is comparatively little danger of serious complications, except in those cases where there is a tendency to the formation of granulation tissue. If this tendency be present, the external opening in the drum may become choked and the purulent secretion may be forced back into the mastoid cells, where it may result in untold mischief. In the absence of polypoid formation, however, the danger may be avoided by frequent cleansing. If this be neglected, the opening in the drumhead may be narrowed or obliterated by inspissated pus, the retained discharge undergoes decomposition, and may become so acrid as to cause extensive ulceration

of the soft tissues and caries and necrosis of the osseous structure, not only of the tympanic cavity proper, but of the mastoid cells, presenting all the symptoms of pus retention.

The path of the destructive process is more commonly in the direction of the mastoid cells than elsewhere, because here is usually the line of the least resistance. This is especially the case with children, on account of the anatomical relations present at this time. Should the pus force its way to the surface here, we have the symptoms of mastoid periostitis, with redness, œdema, and tenderness of the soft parts over the process, going on to the formation of abscess. If the tympanic roof be the point of attack, meningitis may be the result, either diffuse or circumscribed.

Extensions in the direction of the internal ear are not common, although occurring occasionally; but the canal of the facial nerve is not infrequently invaded, with the resulting paralysis of the corresponding side of the face. The lateral sinus may be affected, either by vascular communication or by the direct entrance of pus into the sigmoid fossa, with consecutive inflammation of its walls and thrombosis.

Should infectious material find its way into the jugular vein, it may be carried to other parts of the body; producing general pyæmia or metastatic abscesses.

Finally, an erosion of the carotid canal may cause fatal hemorrhage.

Any of these complications may occur, and occasionally the purulent invasion may extend in several directions. A rather unusual direction of extension is that observed in a case reported by Dr. Frank L. Stillman in the *N. Y. Medical Journal* of February 6, 1897, in which a retropharyngeal abscess formed in direct connection with the middle ear, so that pressure upon the swelling in the throat produced a flow of pus from the perforation in the tympanic membrane.

The question of cleanliness has several times been spoken of in this paper—by cleanliness is not meant simply the mopping up of the pus as it appears in the external audi-

tory canal, but the absolute cleansing of all the parts concerned. This may be done, first, by removing the discharge in the canal, followed by the free use of Politzerization, which tends to force out the discharge through the perforation into the canal—if the perforation be too high in the membrane, it should be freely incised to the lowest margin. When the parts are presumably freed from pus in this manner the canal should be partially filled with a solution of formalin 1-500; and the nasal end of the Politzer bag being tightly applied to the external opening of the auditory canal, the rubber bag should be forcibly compressed until the fluid is forced through the eustachian tube to the throat, where its presence will be recognized by a hissing sound and the smarting of the nasopharyngeal mucous membrane. After this the parts should be carefully dried with absorbent cotton, and a small pledget should be left in the canal to prevent the patient's taking cold. This procedure should be repeated often enough to keep the parts free from pus; and under such treatment, combined with the indicated remedy, many of the most stubborn cases will speedily yield.

This treatment should not be used while severe pain is present, but as soon as the most acute symptoms abate it will be found of the utmost value. The prime factors in the prevention of serious complications in suppurative ear affections are early recognition, energetic treatment, absolute cleanliness.

110 West Forty-eighth Street.

OPHTHALMIA NEONATORUM.*

G. DE WAYNE HALLETT, M. D.,

New York.

OPHTHALMIA neonatorum is a gonorrheal or purulent ophthalmia of the new-born. The infection occurs as a rule during parturition, and the disease manifests itself on the second or third (rarely on the fourth or fifth) day after birth. In those cases in which the disease makes its appearance still later than this the infection cannot be referred to the act of birth, but is due to careless bathing, the use of soiled towels or sponges, subsequent contact with the lochial discharges, or infection from another patient (in the case of lying-in establishments). The majority of cases and all severe forms are due to the gonococcus of Neisser. Very exceptionally the inoculation takes place *in utero*. The gonococcus is especially numerous in the muco-purulent stage. In cases exhibiting the specific microbe the disease is severe and the cornea apt to be involved, while the contrary is true of those non-specific. Inoculation with healthy lochia will not produce this disease. It is probable that not every infected vagina causes a purulent ophthalmia, but the danger must be greater in cases of face presentation and retarded labor. During parturition the eyelids and all the presenting portion of the child are covered with the vaginal secretion, and at the moment of the eyes slipping past the edge of the perineum it is reasonable to suppose that this elastic structure may force open the lids, when, if the secretion is septic, infection would occur.

* Read before the New York County Homeopathic Medical Society.

The palpebral conjunctiva is first affected. The superficial layer exfoliates, the color is bright-red, the papillæ are swollen, the vessels exposed and hemorrhagic, and there is considerable lymphoid infiltration. During this stage the gonococci are found in the nuclei of epithelial cells and within, and upon pus cells. At a later period they penetrate the epithelium and enter the lymph-spaces. Inoculation with this secretion will reproduce the disease in another eye or in the urethra.

The discharge at first is slightly turbid, a little mucus gathers at the inner canthus, and the palpebral vessels are slightly injected. In this stage it easily passes for those mild catarrhal affections which yield to a boric-acid solution. The disease progresses rapidly, however, and within a day or two the palpebral conjunctiva becomes swollen, red, and velvety; loses its superficial layer and secretes pus freely. The bulbar conjunctiva shows an increasing injection. On everting the lid flakes and longitudinal strings of lymph are found, the color of the conjunctiva becomes darker, and it bleeds easily. The lids become puffy, sometimes to an extreme degree, and the upper is apt to overhang the lower, and pus may exude between them. The ocular conjunctiva becomes chemosed, injected, and infiltrated; it may overlay the cornea so that the latter appears as at the bottom of a pit, and much smaller than it really is. If pus, which has now become thick, yellow, or greenish-yellow, does not escape between the lids, it will accumulate in the *cul-de-sac*, to escape in quantity when the lids are forced open. The lids are tense, and blepharospasm is marked.

In this stage the cornea is in danger of breaking down from interference with its nutrition, due to pressure of the chemosis upon the long and anterior ciliary arteries, or to ulceration from direct infection of its surface from the discharges. During this period it is difficult to evert the lids on account of their greatly swollen state, the blepharospasm, and the photophobia. As the disease advances the lids become less tense, can be more easily everted; the con-

conjunctiva is thrown into folds, with elevated papillæ, and the discharges contain blood and serum. With a gradual subsidence of all the symptoms, an end of the discharges may be expected in from six to eight weeks. After all discharges have ceased the conjunctiva will remain thickened and of a granular appearance for some time. As compared with the same disease in adults, there is less danger to the cornea, less chemosis, and, while the swelling of the lids is generally greater, it is more easily accommodated by the more relaxed tissue of the infant. The great danger of this disease lies in its tendency to involve the cornea in an ulcerative process. The greater the chemosis and the more virulent the discharges, the more danger to the cornea. When its vitality is impaired, its lustrous surface becomes dull and hazy. If this occur in the first few days of the disease the danger is materially increased. Ulcers of the cornea may occur in any location, but are more frequent near the limbus; they may be clear or surrounded by a ring of hazy infiltration, and involve only the superficial layers, or they may cause a perforation. Superficial ulcerations, in healing, will leave no trace, but deeper ones involve a connective tissue development, and will result in more or less opacity. Owing to the rapid tissue changes in early life, even these, when not too dense, may in time become clear. A perforation of the cornea not only allows an escape of the aqueous humor, but likewise permits an entrance of the purulent discharges into the anterior chamber. Perforations of the cornea, occurring at its center, and when not too extensive, are more favorable in their results than are those in the periphery. In central perforation the aqueous escapes, the lens advances to contact with the cornea, lymph fills in the ulcer, the aqueous re-establishes the anterior chamber, the lens and cornea separate, the ulcer heals, and the little mass of lymph left on the anterior capsule of the lens results in the formation of a pyramidal cataract. In peripheral perforations the iris is carried forward by the escaping aqueous and becomes entangled in the opening. The inflammatory exudation fixes the iris to the posterior

surface or in the substance of the cicatrix. In either case there is usually a dense white scar that receives the name leucoma adherens. If the newly formed tissue is thin and bulges forward, from inability to resist the intra-ocular pressure, it is called an anterior staphyloma. When the ulcerative process involves the larger part of the cornea it becomes a necrosis, with an extensive slough of corneal tissue. If at the same time there is a total prolapse of the iris and an inflammatory exudate which binds the mass together, and there is a protrusion of the cicatrix thus formed, the result is a total anterior staphyloma. A symblepharon rarely occurs.

The result of the invasion of the anterior chamber by the purulent conjunctival discharges may be an infection of the uveal tract (iris, ciliary body, and choroid), causing a panophthalmitis, with a rapid loss of the eye, or an iridocyclitis, with a slower shrinking of the tissue and final atrophy of the bulb. Ulcerations of the periphery in the lower portion of the cornea are apt to result more unfavorably, because of the greater pressure of the lower lid. Not all cases of ophthalmia neonatorum pursue the severe course just described. In the greater number of cases perforation does not occur, and in many instances the disease is not more severe than a muco-purulent conjunctivitis, an epidemic of which we have recently had in this city.

As the symptoms may be mild or severe, so the conjunctiva may differ in appearance. In some cases the papillary enlargement will be but slight, and in others excessive. The coagulated lymph may be in easily detached flakes or bands, and in other cases it may have all the appearance of a diphtheritic membrane with an infiltrated base. Exceptionally constitutional disturbances occur, such as complicate gonorrhea, in the adult. The only difficulty of diagnosis is in the early stages, when it may be mistaken for a mild catarrhal conjunctivitis, and proper treatment thereby be delayed. The greater number of cases, when properly treated from the commencement, result favorably. The prognosis should always be guarded, however, for the early

symptoms are not always a criterion of the later progress of the disease.

Statistics covering the causes of blindness have shown that nearly three-quarters of all cases occurring during the first year are from ophthalmia neonatorum, and from twenty to thirty per cent. of all cases are from this cause. The importance of these facts has led to the adoption of prophylactic measures in lying-in establishments and by individual physicians, which have produced most satisfactory results, and the outlines of which may be appropriately stated in a paper on this subject. The principle which underlies prophylaxis is the avoidance of infection during parturition. To this end the vagina should be cleansed with antiseptic solutions directly before delivery, and the lids of the newly born infant wiped off carefully with aseptic gauze. During the first bath the eyes should not be wet with the water of the bath. As soon as the child is wrapped up the eyes should again be cleansed with sterile water and gauze, and then a drop of a two per cent. silver nitrate solution dropped into each eye. This procedure was devised by Cr  d   of Leipsic, and through its use cases of ophthalmia neonatorum were reduced from about eleven per cent. to less than a half of one per cent. Similarly favorable results have been achieved in widely separated maternity hospitals, till the value of the method has received universal acceptance. The nitrate of silver solution destroys the gonococci on the surface and in the outermost layers of the epithelium. Exceptionally a decided reaction follows this application, requiring the local use of cold to allay the irritation.

In the treatment of this form of purulent conjunctivitis the local measures will be presented first, as being of greater importance. When an infected eye reaches the stage of hyper  mia no methods of abortive treatment, although formerly in favor, are now approved. Throughout the disease the most perfect cleanliness must be observed. Flushing the eye should be frequent—at least once an hour, and oftener when necessary. The solution used may be of saturated boric acid, sodium borate (15 grains to the

ounce), or bichloride of mercury (1-10,000). The escape of secretions should be encouraged, and the integument of the lids protected by using benzoated lard or plain vaseline, after each cleansing. If it should happen that only one eye is affected, the other should be protected by a bandage. A protective cover glass is inappropriate for infants. Until the discharge becomes thick and creamy no strong solution should be used. Prior to the period of free-flowing pus the treatment consists of frequent irrigation, the wiping away of all secretion, and the unremitting application of ice-cold cloths. This is accomplished best by having a large block of ice on which several two-inch-square pads of cloth are placed. Each pad consists of several layers. The cold pads are placed on the eye and changed every few minutes, never being allowed to get warm. To maintain this night and day requires at least two nurses. It has been shown that the temperature of the conjunctiva may be kept down to from 88° to 94° F., according to the degree of œdematous swelling, and that the gonococcus develops but slowly in a temperature of 90° or 92°. During all of this first stage the swelling is great, the lids tense, and the secretion scanty. When irrigating or wiping away discharges, constant care should be exercised not to injure the cornea in any way.

During the second stage the swollen lids become softer and the discharge creamy and more abundant. Formerly it was customary to continue the ice cloths through this period, but more recently heat is employed in the shape of pads, soaked in a carbolyzed solution heated to 120° F. The irrigation and cleansing away of all secretions is continued. Once a day the physician applies a silver nitrate solution in the strength of 5, 10, or 20 grains to the ounce. When this application is made the lid is fully everted, and so held as to protect the cornea. All flakes of lymph are entirely wiped away and the silver solution brushed over the conjunctiva. Immediately the part is to be flushed with a salt solution (40 or 50 grains to the pint), and continued till no precipitate occurs. This procedure neutral-

izes the excess of silver, producing a silver chloride. Ulceration of the cornea is no contra-indication for this treatment, but care should be taken to make little pressure upon the globe. So long as there is an abundant discharge this daily brushing should be maintained. Careless or incompetent use of this procedure in case of ulceration may deposit silver in the substance of the cornea. At the first appearance of any corneal haze warm applications should be used and ice cloths withdrawn, if previously employed. Corneal haze is also an indication for the employment of atropin (4 grains to the ounce). Atropin should be continued in the case of central corneal ulcerations. If, however, a marginal ulcer occurs and perforation seems imminent, the indication is then to substitute eserine sulphate (1-200). The reason for this is that eserine, being a myotic, will allow less prolapse of the iris in the event of perforation. Under no circumstances should any prolapsed iris tissue be ablated. An intact iris affords considerable resistance to the entrance of germs, while a cut surface invites it. Should the iris be infected, panophthalmitis would be the probable result. Formalin (1-100-500-1000) should be applied to the cornea, in case of ulceration of that structure. Scarification and leeching are advised in adults when there is great swelling, but hardly seem appropriate for infants. Division of the outer commissure is often a procedure of great value.

After the purulent discharge has materially or altogether ceased the conjunctiva remains swollen or hypertrophied, and for this a stimulating, and, at the same time, astringent application will promote a return to the normal. This indication is well met by tannic acid in glycerin (fifteen grains to the ounce). Sulphate of copper (one grain to the ounce) and the alum stick are also recommended. Finally, we may come to the need of a bland solution such as boric acid or sodium borate. Recently a new silver salt called protargal has been put forth, which is described as an organic combination of silver with a protein molecule. It is a light-yellow powder and soluble in twice its weight

of cold water. The solution is clear and permanent, is not precipitated by sodium chloride nor by solutions of albumin. Protargal in one per cent. solution is said to destroy the *staphylococcus pyogenes aureus* in twenty minutes. An aqueous solution, five to ten per cent., is used in ophthalmia neonatorum every hour, with excellent results. One investigator reports using a twenty per cent. solution, passing it from end to end of the *cul-de-sac* on a cotton carrier. All persons who come in contact with the patient should be warned of the infectious character of the disease, and all cotton, bandages and pads used about the eye should be burned. In view of the specific, bacterial origin of this disease it would seem that drugs taken internally, very dilute or potentized, could exert no beneficent effect, and yet we have evidence from our clinics and a long line of observers that many drugs mitigate and favorably modify purulent ophthalmia, in its symptoms and in its entirety. Briefly stated, the indications for homeopathic remedies are as follows :

Aconite.—In the first stages, or even later in the disease, if there is *much burning heat in the eye*.

Apis mellifica.—Lids red, swollen, *œdematous*, and full of dark-red veins ; upper lid overhangs the lower ; *stinging and shooting pains* ; moderate discharges.

Argentum nitricum.—This remedy is used in purulent ophthalmia more frequently than any other, and yet it has but a very slight foundation of provings. Clinically, it includes the entire picture : chemosis, purulent discharge, and hazy cornea. The swelling of the lids, indicating silver nitrate, is not from infiltration of connective tissues, as in *apis* and *rhus*, but is due to lymphoid infiltration and subconjunctival engorgement.

Calcareo carbonica.—Profuse, yellowish-white discharges, *œdema* of the lids, and ulceration of the cornea. Its general symptoms must indicate this drug, for those referring to the eye are not characteristic. In the after-conditions it is a help (like *kali mur.*) in clearing up opacities.

Calcareo hypophosphorica.—Purulent ophthalmia in debili-

tated patients. Tension of the globe is reduced below the normal.

Chamomilla.—As an intercurrent remedy, when indicated by its general symptoms of fretfulness.

Hepar sulphur.—In any form of this disease, especially if the cornea has ulcerated. The lids bleed easily; very sensitive to touch. Photophobia is intense, and all conditions are relieved by warmth and aggravated by a draught of air. If hypopyon should result from severe ulceration, then *hepar* is especially indicated.

Mercurius.—In cases where the discharges are thin and excoriating, and particularly if there is a syphilitic heredity. The general symptoms are important aids in selecting this drug.

Pulsatilla.—This remedy is second to *argent. nit.* in frequency of clinical indication. It covers the whole picture of the disease, but the discharges must be *profuse* and *bland*. Often used intercurrently with *argent. nit.*, when that drug ceases to improve.

Rhus toxicodendron.—The lids are red, œdematous, and tightly closed. The palpebral conjunctiva is thick, dark red, and swollen, and the connective tissue of the lid is infiltrated. When the lids are opened the discharge may be creamy, but is more apt to be watery and profuse, and to fairly gush out.

Other remedies may be indicated by the prominence of the general symptoms; and clear pictures of drug action should be followed, even if the ocular symptoms are not included.

132 West Eighty-first Street.

REFRACTION METHODS.

E. W. BEEBE, M. D.

Milwaukee, Wis.

INSTRUMENTS for measuring refractive errors are divided into two general classes—the objective and the subjective varieties.

Of the former we have the ophthalmoscope, retinoscope, and the ophthalmometer; and of the latter a large number of optometers, refractometers, and the trial case.

Some of these are of such doubtful efficiency that many refractionists still rely wholly upon the tedious and antiquated method, with trial case and wall types; with these, and the use of a mydriatic, no one can truthfully say that good results are not obtained, but to secure them the mydriatic must not be dispensed with, and to this objectionable feature, and to the time necessarily expended in adjusting correcting lenses, are found the chief objections to the use of this method.

There is a demand, therefore, for more speedy devices, in the use of which the comfort of patients will be assured, while correcting lenses are being adjusted to the various forms of refractive errors.

In view of this fact, a brief consideration of a few of the more important instruments of each of these classes may not be without interest, particularly to those beginning the practice, as well as those who confine themselves entirely to the trial case.

The ophthalmoscope was the first of the objective methods to come into use, and although designed and used for quite another purpose, it is, as is well known, available

to the operator to determine approximately the errors of refraction; which fact need not be discussed at this time, from its general acceptance.

The only remaining instrument of importance of this type is the retinoscope, and as to its utility there is a difference of opinion among refractionists; it is probable, however, that those who are most enthusiastic in its praise have plenty of time at their disposal and abundant facilities for making the wearisome tests, for it is not, and possibly never will become, an instrument of precision, but, like the ophthalmoscope, it will be limited ultimately to the obtaining of approximate results under favorable conditions.

Undoubtedly the reputation it has achieved is largely due to the fact of its usefulness in hyperopia with accommodative spasm, and there is no doubt of its availability in such cases; but usually as good results can be obtained with the trial case with much less annoyance to patients; and quite as speedily as can be accomplished by the use of this instrument; it is also a mooted question as to whether a knowledge of the total amount of latent hyperopia is essential to the proper adjustment of lenses, the writer being among those who believe it is not.

The ophthalmometer is at the present time quite popular among a certain class of operators, though it is impossible to conceive why it has become so, for, of all the devices invented for the use of the refractionist, it certainly is of the least practical importance of any for the purpose of determining the lenses to be worn in a given case.

A modern writer, in speaking of its scope and usefulness, expresses himself rather tersely, but I believe correctly, when he says of it: "When stripped of all the profession that has been made for it, it resolves itself into a piece of instrumentation that is intended for the determination of irregularities of the anterior face of the cornea."

It is well known that astigmatism not infrequently varies quite materially in the different zones of the pupillary space, amounting in some cases to more than a diopter;

this being conceded, accuracy of results in determining astigmatic errors can hardly be expected in instruments of this kind.

Neither is it of importance to the operator to obtain a knowledge of the amount of corneal astigmatism, if the lenticular error remains uncorrected; and the time spent in instrumental manipulations for this purpose is entirely unnecessary, as well as a great annoyance to patients.

For practical purposes, therefore, the objective methods are of minor importance to the practitioner, and it is to the subjective instruments only we must look for the much-desired improvements in refraction methods; and while some of these instruments are so complicated and cumbersome as to make their use impracticable, there are many others that are not, but which, when used in connection with the trial case, are of undoubted advantage in obtaining speedy and accurate prescriptions for lenses.

Of the subjective instruments, the De Zeng refractometer is, perhaps, the most popular at the present time; it is beautifully constructed, and is capable of doing excellent work in the hands of an expert. It is, however, quite expensive and somewhat complicated, and some of its tests do not appear to be sufficiently accurate for all purposes.

There is another, poorly constructed but exceedingly valuable, instrument in the market, known as the Fay optometer, which I believe to be one of the most valuable of all to the busy refractionist. It has one exceedingly bad defect, however; for, in the detection of astigmatic errors, it depends upon the use of the stenopaic slit, which, as is well known, is not sufficiently accurate for good work.

Probably the most exact and practical instrument for the detection of astigmatism is that known as the prisoptometer, and although open to other objections, it, in my estimation, takes precedence of all others for this purpose. The fact, however, that it must needs be stationary like the De Zeng instrument, with reference to its wall charts, is objectionable.

For the purpose of making it portable, still retaining its

usefulness, I had an instrument constructed upon similar lines, but which is complete in itself and requires no accessories. On its completion I found I had "builted better than I knew," for, in addition to its value for measuring astigmatism at the near point, it practically dispenses with the use of a mydriatic in hyperopia; the full amount of the error being obtained, as when atropin is used. This renders it unnecessary to first correct errors for distant vision, as is usually done, for reading lenses are by its aid prescribed at once. In children and illiterates it is especially valuable, as the accuracy of its tests does not depend upon the patients' ability to read, or upon their acuteness of vision.

That the principle it represents is best of all the subjective methods up to the present, I have no doubt; neither have I reason to believe that the acme of perfection has been reached by it; but it is such a vast improvement in accuracy, speed, and convenience over all objective methods that I am well convinced that the time is not far distant when they will no longer be considered necessary adjuncts to the armamentarium of the refractionist.

173 Wisconsin Street.

PARTIAL DISLOCATION OF THE LENS AND RUPTURE OF THE CHOROID, WITH RECOVERY.

J. W. JEWETT, M. D.,

New Haven, Conn.

THE following case of partial dislocation of the crystalline lens and rupture of the choroid, with complete replacement of the lens, may prove to be as interesting to others as it was to the writer.

On the evening of October 18, 1897, I was called to see S. B., a young man aged twenty. Family and personal history good, never had any trouble with his eyes, is employed in a grocery store. At about eight o'clock he attempted to break a piece of cheese box by reversing the curve of the wood ; it suddenly broke into several small pieces, one of which struck him, as he thought, over the left eye. This caused him considerable pain, so much in fact that in a short time he had to send for a physician.

I first saw him at about ten o'clock, at the request of the doctor, and found the patient in bed ; pain in the eye very intense and with considerable nausea. The photophobia was so intense that he could not bear the presence of any light at all in the room. There was a small spot of ecchymosis on the outer surface of the upper lid, but no sign of injury on the conjunctival surface. After several instillations of cocain I was able to examine the eye. The corneal surface was perfectly smooth, and the cornea transparent ; the fundus reflex less than normal. There was a partial dislocation of the lens backward into the vitreous ; the upper border of the lens appearing at the junction of the upper and middle thirds of the pupil, when fully dilated. I advised immediate removal to the hospital, and

applied a pressure bandage, lightly but firmly, over the injured eye. The removal was made in a very easy carriage, and all movements were made with the utmost deliberation and caution, with the object of preventing further dislocation of the lens. At this time the vision was only equal to counting fingers at one foot. The fundus was obscured by hemorrhage into the vitreous.

At the hospital the patient was placed in bed, lying on his stomach, with the left side of his head and the left eye on an ice bag. This position was maintained for three or four days. He was given rhus 1x hourly, with ipecac. if the nausea was very annoying.

On the next day, the 19th, he had much less pain and little or no tenderness over the ciliary region, but in the evening there was a very marked chemosis of the conjunctiva, when apis 9 was given, in alternation with the rhus.

On the 20th the chemosis had greatly diminished, and the pain also was much less. The fundus was obscured, and he could not count fingers at one foot. Tension normal.

At the end of a week the chemosis had entirely disappeared and there was a very slight reflex from the fundus, with ability to count fingers at four feet under the best conditions of light and position.

At the end of ten days the fundus could be seen indistinctly; there was an apparent hemorrhage into the retina, about one disk diameter above the optic nerve entrance and to the nasal side of it. At this time there was iridodonesis at the upper portion of the pupil, and vision of about 20/200. The recumbent position was retained as much as possible, and the eye lightly bandaged.

One month after the accident the iris was still slightly tremulous, and the vision was 20/70 with difficulty. The vitreous was somewhat hazy. The spot of hemorrhage into the retina had disappeared, and in its place was a crescent-shaped rupture of the choroid, where the retinal vessels could be plainly seen passing over the sclera. At this time the patient thought that he was losing his vision in the left eye. He was kept under close observation for four or five months, the vision gradually improving until it reached 20/30 in the left eye; with -0.75 D° axis 180° , = 20/30.

After a lapse of three years the vision still continues good, and there is no iridodonesis.

The writer believes that this case was a clear one of partial dislocation of the crystalline lens backward into the vitreous, and that the posture had very much, if not everything, to do with the replacement. The only part that remedies had to do with the case seems to have been to take care of the intercurrent conditions, such as the nausea, lachrymation, chemosis, and so forth.

In such cases as the above, position should be accorded the first place in the treatment. Operative measures should not be resorted to unless there is increased tension, due to swelling of the lens. In such operative cases there must have been a penetrating wound, and the probable conveyance into the eyeball of disease germs of a dangerous character.

215 Crown Street.

PENETRATING WOUND OF THE EYEBALL.

LEIGH BAKER, M. D.,

Washington, D. C.

THE patient, who combined within himself the requisites of a fairly extensive eye clinic, had been under my observation for some time prior to the injury of which I speak, and I had had opportunity to carefully examine the eyes under varying conditions. When I first saw him I noted the following :

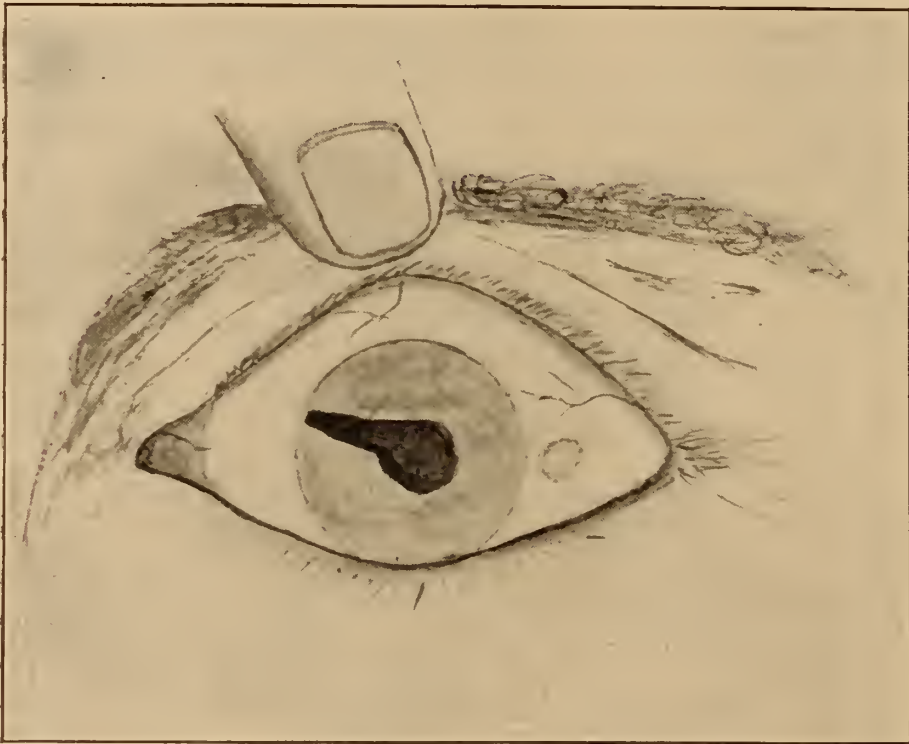
Male, aged forty-four, no history bearing on present conditions. Right eye.—Anterior chamber occluded by the results of an old kerato-iritis. Tension normal or slightly +. Conjunctiva of lids and ball normal. The inflammation, patient reports, occurred when he was a small boy. Left eye.—All tissues to the choroid are normal, but that tunic shows a subacute choroiditis, evidently due to the presence of a fairly high myopia. Examination showed 10 Ds., which correction he has been wearing. In the early spring of 1900 his vision began to fail, but I did not see him until October, at which time the lens had become decidedly cataractous, the opacity covering the normal pupillary area. He wished to try absorption, but on account of his myopia I advised waiting until later, and to have extraction done ; this course was finally decided upon.

On the evening of November 23 last he came into my office and reported that, while in the act of bending over about an hour before, his left eye had come into contact with a wire nail which was sticking through a board on a barrel.

The wound, which was about three lines from the cornea toward the outer canthus and one line below the horizontal meridian, penetrated to the vitreous, of which there was some escape. This I excised and then cauterized the wound. The iris at the time seemed perfectly normal, responding to light uniformly, throughout its entire circumference.

I prescribed cold application locally and aconite 3x internally, the latter being used for three days ; and then I gave rhus tox. 3x, internally and locally, in a lotion of boric acid and rose water.

The congestion disappeared slowly, although the wound contracted nicely ; the conjunctiva clearing in about four days near the inner canthus ; the entire eye being clear in about two weeks. But with the contraction of the wound and the clearing of the conjunctiva came a gradual contraction of the iris, resulting in an elongation of the pupillary area in the direction *away* from the seat of the wound ; and now, seven weeks after the injury, the eye presents an appearance similar to that shown in the accompanying rough sketch.



The vision before the accident was sufficient to enable the patient to see large objects, but immediately afterwards, and for several days, he could barely distinguish the difference between the amount of light when diffused or when directed into the eye by means of a condenser ; this condition, however, gradually improved, and he has about the same vision as before the accident.

The pupil at present responds to light and to the action both of atropin and eserine, except at the point of elongation, where it is unaffected by any agent. The question raised by this phenomenon is : Do the ciliary nerves passing over the outer hemisphere of the eyeball supply the inner half of the iris ? If not, how can this elongation of the pupil *away* from the seat of injury be accounted for ?

KALI BICH. IN KERATITIS. SAEMISCH INCI- SION. CATARACT.

THOS. M. STEWART, M. D.,
Cincinnati, Ohio.

REPORTS of cases may not be as brilliant as original papers, but cases and what we do for them, say to them, and the results we get, are our "daily bread." These few cases have some points of interest to all oculists.

CASE I.—Mr. E. H. B., aged twenty-eight, applied for treatment July 1, 1900. Diagnosis: Phlyctenular keratitis. The case ran a protracted course, under approved treatment; including a careful supervision of patient's diet, directions as to the drinking of water, and general care of his body. Iritis developed, the superficial phlyctenular keratitis changed to infiltration of the deeper corneal layers. The case had the appearance of a corneal abscess, but it was of the non-suppurative variety of deep corneal infiltration. The successful outcome was due to the condition remaining uninfected.

The treatment was atropin to keep the pupil dilated, and massage of the cornea with mercurial ointment in the early stages, especially as mercury was the indicated remedy. After the iritic symptoms had subsided, the patient wanted "that white spot cleared away." Various remedies were prescribed, and on account of so few symptoms, "very little redness or photophobia, no pain or lachrymation, and the chronic indolent form of inflammation," kali bichromicum 3x was prescribed. Improvement was coincident with the taking of kali bich.

In many of the so-called scrofulous cases kali bichromicum is doubtless called for, and the keynote to direct our attention to the remedy is the "chronic indolent" character of the case.

CASE II.—Mrs. L. H., aged twenty-eight. Gonorrheal ophthalmia, due to use of towel used by servant ; disease traced to the servant in question. Abscess of left cornea ; right cornea presented a wrinkled, steamy look ; left cornea had already broken down, and iris had prolapsed. Saemisch incision made upon right cornea ; suppuration, however, was not arrested. Case is reported because it shows the value of the Saemisch incision. Left eye, after inflammation subsided, was soft and disorganized. Right eye was of normal tension, warranting an operation on the iris, which was occluded. If Saemisch incision had not been made a spontaneous rupture of cornea would have followed, and the eye would have become disorganized like its fellow.

CASE III.—Young man, aged twenty-eight. Cataract left eye. Had been under treatment eighteen months by an “ Absorption Cure ” doctor. Examination showed a fully developed cataract. Candle test showed no light perception except small area in nasal portion of retina, and no light projection. Tension minus ; advised against operation for visual purposes. Referred him to an oculist who had examined him many years ago ; and his records showed at that time patient was suffering from a detachment of the retina. Case is reported without comment.

704 Elm Street.

IMPORTANCE OF EARLY DIAGNOSIS IN IRITIS AND GLAUCOMA.

E. D. BROOKS, M. D.,

Ann Arbor, Mich.

HAVING recently witnessed the deplorable results following tardy or faulty diagnosis in some cases of these diseases, it occurred to the writer to again set forth in plain terms the principal points of difference between iritis and glaucoma, with the intent to enable the general practitioner, with all his multitudinous duties, to quickly and certainly differentiate between them.

The necessity for this differentiation becomes obvious when we take into consideration the fact that the line of treatment that is proper and essential in the one disease is almost certain destruction to an eye afflicted with the other disease: *e. g.*, the prompt and vigorous use of instillations of atropin, to dilate the pupil and keep it dilated as long as the disease continues, is a prime essential in the treatment of iritis, but is highly destructive to a glaucomatous eye. On the other hand, the use of eserine instilled in an attack of glaucoma, to contract the pupil and draw the iris away from the periphery, is of the first importance in its treatment, but would be certain to entail lasting injury upon an eye suffering from iritis.

There is not space in this article to dwell upon the reasons for using these opposite modes of treatment (any text-book on the eye will furnish them), but only to emphasize the necessity for early and accurate diagnosis.

This differential diagnosis ought not to be so very

difficult, if one is on his guard, since the differences are usually constant and well marked, and those I shall mention require no special skill or special instruments for their detection. Any case that cannot be diagnosed by the family physician from the symptoms herein stated is outside the province of this paper and should be sent at once to an oculist. Only those symptoms occurring early in an attack will have mention here, and are as follows:

In iritis the color of the iris undergoes a change, being reddened and its luster lost; it has a muddy appearance. This does not occur in glaucoma in the early stages, if at all.

The pupil is contracted and sluggish in iritis; dilated and does not contract when exposed to light, in glaucoma.

A rosy zone of enlarged vessels about the cornea in iritis; conjunctiva diffusely red in glaucoma.

Lids not affected in iritis; may be swollen in glaucoma.

Corneal sensitiveness lessened or lost in glaucoma; not so in iritis.

Tension of eyeball increased in glaucoma, not so in early stages of iritis.

Vision may be lessened from deposits in pupillary space in iritis; much lessened, or lost from intra-ocular pressure in glaucoma.

Glaucoma is essentially a disease of mature age, seldom occurring in people under forty years old; iritis not influenced by age of patient.

The glaucomatous patient sees a halo of rainbow colors about an artificial light; not so in iritis.

Glaucoma usually attacks suddenly, with severe constitutional symptoms, as fever, prostration, and vomiting, so that the local condition may be lost sight of; not so in iritis.

An attack of glaucoma is often precipitated by mental excitement or worry, while iritis is not so caused, but often by exposure to cold or dampness; especially in those predisposed by syphilis, rheumatism, or scrofula.

To recapitulate: Glaucoma is distinguished by hardness of the eyeball; dilated, immovable pupil; halo around a

light; swollen lids; steamy, insensitive cornea; vision lessened or lost; occurring almost exclusively in persons past the prime of life; being often excited by mental excitement or worry; and accompanied by severe constitutional symptoms.

Iritis has: iris discolored and muddy; pupil contracted and sluggish, or glued fast to the lens capsule; rosy zone about the cornea; attack often excited by exposure to inclement weather; a rheumatic, gouty, or syphilitic dyscrasia often as a predisposing cause.

Neither need be mistaken for conjunctivitis, if it is borne in mind that in the latter disease only the conjunctiva is primarily affected, with redness and discharge corresponding to the variety of that disease.

ARE DEFORMITIES OF THE NASAL SEPTUM LESS FREQUENT NOW THAN FORMERLY?*

FRED. D. LEWIS, M. D.

Buffalo, N. Y.

THE above question was suggested to me by the less frequent demand now for the saw than in my early practice. In my post-graduate course the saw, drill, or cutting forceps were in use almost daily; and in my first years of practice, although I saw many fewer patients, I did much more cutting. Has surgical procedure along this line become more conservative? Have we cleaned up an accumulation of cases for whom previously we had not the proper means to operate? Or are conditions such that the septa of the developing generation are growing nearer to what nature intended? I think the true answer is the last suggestion.

Now, on what basis can this belief be established? First of all, let us consider what would be the most frequent cause of a septal deflection or spur. The answer is at once suggested, an injury. Now are children, during the period of development, when the tissues are soft and easily bent, less liable to injuries than they formerly were? A walk along any residence street will answer the question. In the days of years ago the children played on the streets at baseball, tag, catching rides, etc.; when the nose was frequently struck, slight hemorrhage resulted, which soon stopped and was forgotten. To-day the children are sent

* Read before the New York State Homeopathic Medical Society at Albany, February, 1901.

to Kindergarten at an early age, and at the time when we were romping on the street they have developed into little men and women.

Another cause of deflected septum is the narrow mouth and resulting high-arched palate due to adenoids. This defect has been recognized as interfering with mastication and thus with the health, and its correction is one of the great advances in dentistry. This is established by wearing a plate attached to the teeth that can be widened a little each day, gradually bringing the growing bony parts to their proper position. The great good that will result from this more normal natural position of the parts in the child cannot be estimated. The nose, as we know, is intended to take from the inspired air the solid impurities, such as particles of dust, soot, etc., and add to it moisture and heat before it reaches the lungs. This is done more effectively if the parts are as nature intended them to be. Again, deformities of the septum frequently result, when there is contact with the opposite wall, in numerous and varying reflexes, oftentimes of a very annoying or dangerous nature.

It might not be out of place here to refer briefly to some of the more pronounced reflexes that I have observed from this cause. The first of grave importance was in my early practice, when a patient came to me stating that she had her trunks packed and ready to start for the South to winter on account of supposed consumption. A friend of hers and a patient of mine insisted that she come to see me before leaving. Instead of sending her South I sent her to the hospital, where I relieved a pressure between the middle turbinated and septum which had been the cause of the cough that was so alarming. A week later I sent her home, where she has remained since, perfectly well. The pressure in this case was from the enlargement of the middle turbinated, but would have been the same if it had been a spur in the same location. Another recent case was a man who had consulted several oculists for relief of a persistent congestion of the conjunctiva of one eye, with a great deal of

lachrymation. Washes and internal medication were of no assistance. The removal of a spur about the size of a bean from the nostril, corresponding to the same side as the offending eye, resulted in a speedy return of the eye to a normal condition. The spur was interfering with the tear duct. Cases of reflex might be multiplied indefinitely, but I do not wish to take the Society's time for that purpose.

It is my opinion also that, when there is no anterior obstruction to interfere with free respiration, there will be less tendency to the development of adenoids and hypertrophied tonsils.

These are but a few thoughts that have suggested themselves to me and scarcely make up a paper such as I would have liked to present at this time, but I hope the discussion will make up for what the paper lacks. I would like to hear from some of the members from other sections of the State if their experience coincides with mine; are deformities of the septum less frequent, or is it a local condition, or possibly simply happened so in my practice?

188 Franklin Street.

Discussion.

A. WORRALL PALMER: In answer to the doctor's question, the subject of the paper, I must admit that I have not noticed any decrease in their occurrence; at least judging from the frequency of septal operations at the N. Y. Ophthalmic and Manhattan Hospitals and the N. Y. Eye and Ear Infirmary.

The decrease of such operations in the doctor's practice is rather due, I think, to increasing conservatism, caused by his close observation and individualization. The procedures employed in the early years of a physician's career are greatly influenced by the methods of his instructors; whether the student was principally impressed by the rather rash and showy operator, or by the conservative instructor. After a few years of actual experience the physician can and does stamp his individuality on his practice.

The lesser liability of children to accident referred to by the author, and rightfully attributed to the supposedly advanced

custom of sending our children to school early instead of romping on the street, I most heartily regret; for from my ten years' observation in the College Children's Clinic, as well as subsequent private practice, I believe it is absolutely necessary to have a strong masonry-like foundation of the physical system in the child if we shall successfully erect a fine mental or financial superstructure in the man. This opinion I think may be substantiated, if you will but once recall to mind that the great majority of the men of note in the professional or financial world to-day were country boys, whose childhoods were spent in the open air and rollicksome sports instead of in the oxygenless and brain-forcing schoolroom.

The bad effects of sundry accidents, incident to rougher sports, among them those of the septum, seem more than equaled by the generally stronger physique of the romping boy.

Respecting the "septum of the developing generation growing nearer what nature intended": although I have not personally observed evidence of such change or improvement as yet, still from all logical reasoning I believe this must ultimately result when we ascertain how many children are now being judiciously operated upon for hypertrophy of the different adenoid tissues of the throat.

When we recall to mind that little consideration was given to the tonsils and adenoids until Dr. Hans Wilhelm Meyer of Copenhagen directed our attention to the deleterious effects of their hypertrophies in 1886, only fifteen years ago—when we think of this recent date, we can scarcely expect to observe much salutary effect of removal of throat obstruction upon the septum.

The mention by the author of an apparent case of consumption, being cured by removing the reflex cause of the cough from the nose reminds me of a case, simulating the same disease, cured by successful treatment of ethmoidal and antral sinusitis, which I would like to relate, but my discussion is already out of proportion to the original instructive article.

ATROPHIC RHINITIS.*

G. M. SEIDLITZ, A. M., M. D.

St. Louis, Mo.

THERE are a few truths inseparably connected with this disease. I wish merely to call attention to them that they may be the better fixed in our memories, as it is only by constant repetition that we retain the most ordinary facts.

There is no such thing as acute atrophic rhinitis. We are always called upon to consider atrophy in this disease from the time we first observe it. Of course there must be a starting point, but at such a stage we never see it. Atrophy is in its very nature a slow process, *i. e.*, it is chronic. Acute atrophy, to be sure, does occur in other organs, but it is the exception to the rule.

Atrophy means waste from lack of nutrition, but the term likewise implies an interference with the function of a part through organic changes. Back of these structural alterations must have existed some prolonged cause. Thus many rhinologists are of the opinion that this disease is always traceable in childhood. Such contagious diseases as diphtheria, measles, scarlet fever affect deeply the mucous membranes. They often leave their characteristic pathological marks behind them, indelibly stamped upon the mucous membrane. A purulent rhinitis may follow, which, if not promptly checked, can readily merge into the atrophic process.

The diagnosis of atrophic rhinitis is readily made. No

* Read before the Missouri Valley Homeopathic Medical Society at Kansas City, October, 1900.

ordinary observer should be misled. There are three cardinal symptoms which distinguish it :

1. The abnormal patency of one or both nares ; the mucous membrane is thinned and closely applied to all the parts. The submucous tissue disappears to a large extent. The substance of the turbinate bodies becomes partly or wholly disintegrated, so that at times mere skeleton outlines of them remain.

2. The presence of thick tenacious crusts within the cavity of the nose. The mucous membrane having lost many of its secreting glands, the secretion contains a greater proportion of solids than under normal conditions ; thus it dries and forms these crusts, which are often difficult to dislodge.

3. A peculiar and offensive odor. The nares being abnormally open, the air passes through without being sufficiently moistened. The normal secretion in the post-nasal space dries quickly and decomposes. This is the cause of the odor, yet some of it must be due to the decomposing crusts within the nares.

The cure of a long-standing atrophic rhinitis is out of the question. We cannot hope to restore structures which have disappeared. Much, however, can be done to relieve such patients, make them a comfort to themselves and their associates. The treatment must aim, first, at keeping the membrane free from crusts ; second, what mucous membrane remains should be stimulated to renewed activity, if possible. Third, the odor should be banished. Saline solutions, if properly used, will accomplish the removal of the crusts and at the same time will abolish the odor. A number of well-known proprietary preparations are efficacious in this direction ; *e. g.*, borolyptol and glycothymoline. The cleansing agent may be used several times daily by the patient as a douche. There can be no harm done to the ears by the douche in the treatment of this disease, if we but caution the patient to introduce it through the less open naris. It is the rule that one side is more patent than the other. Sometimes, in beginning the

treatment of a case, the physician must remove the crusts with a probe or forceps. As an instrument for cleansing purposes it is my practice to employ the postnasal syringe. As a stimulant to the mucous membrane I have found nothing better than formalin 1-500 up to 1-200, applied in the form of a spray or by means of the cotton applicator. After one has relieved a given case to the extent of preventing the formation of crusts and removing the odor, the patient should be instructed to make the cleansing of his nose, twice or thrice daily, a part of his toilet. Without this, a permanent relief cannot be looked for. I believe that the necessity of this habit should be duly impressed upon each and every patient suffering with a chronic catarrhal process in the upper air passages. The teeth should also be diligently cared for, not only on account of the odor they emit when dirty or carious, but because, when neglected, they may detrimentally influence the disease under consideration. Last, but not least, in our therapeutics is the internal remedy. But who will presume to name a specific? Every case is a law unto itself. We cannot but prescribe for the symptoms presented to our observations.

SYMPOSIA.

Uric-Acid Diathesis and Astigmatism against the Rule. By Dr. Louis J. Lautenbach.—The general bodily conditions influence the cornea and its curvatures. While for several years I have been suspicious that the phenomena attendant upon cases in which astigmatism against the rule was present were in some way connected with an increase in the quantity of uric acid retained in the system, it has only been recently that the conviction has forced itself upon me that the connection is too constant to be accidental, and that some causative relation must exist between the two conditions. It does not necessarily follow that there is any one disease at the bottom of all these cases, as the excessive formation as well as the retention of an excess of uric acid are probably but symptoms of many diseased and perverted states, the symptoms depending probably in great part upon faulty innervation occasioned by an unbalanced functional activity of the various nutritive and excretory organs. It is beginning to be a truth with me that the various forms of astigmatism against the rule, as well as its advanced relation, glaucoma, are in some way dependent for their production upon a depraved nutrition accompanied by an excess of uric acid. Of course there is a possibility that the same unknown causes producing the latter condition might produce the abnormal astigmatism, but were this proved it would but strengthen the causative relation of the dyscrasia.

During the first five months of 1899 I have had forty-two cases of astigmatism against the rule. Of these there were two in whom it had been caused by corneal ulceration.

In the other forty cases the urine of each was typical of the lithæmic condition, being acid, of high specific gravity, developing an excess of the urea and uric-acid elements.

In a few cases I have observed, after regular constitutional treatment and the constant use of the proper glasses, that the astigmatism against the rule has lessened or disappeared, and astigmatism with the rule has taken its place.

In one during the period of treatment the ophthalmoscope and ophthalmometer, as well as the subjective testing under a mydriatic, gave constantly varying results.

In quite a number of my patients appropriate local and general treatment overcame the difficulty, normal astigmatism with the rule resulting. In a few patients so controlled there has been a re-development of the eye condition as the uric-acid diathesis reasserted itself.

The reason that more is not known about this condition may be that cases are relegated too soon to the family doctor after the prescription for the glasses has been written; indeed, many doctors seem to think that the eye doctor's work ends always with the ordering of glasses.

In operating, when I get over to the region of the eustachian orifices, unless the swellings be large or very hard, I press on the thickened tissues until I find the contents have entirely escaped; this is done so as to form no contracting cicatrices in this region. I do not leave the cavity until I have either succeeded in removing all of the diseased tissue, or I am convinced that my finger nail is not strong enough to cope with the form of tissue present, or there is evidence that the blood and detritus are interfering markedly with the child's breathing—these two latter conditions are very unusual in their occurrence, and, should they occur, it means that either the same day or the next, if possible, I will again enter the cavity and, if necessary, with the steel finger-nail, remove every bit of diseased tissue discoverable. The entire operation rarely takes more than two or three minutes, and is followed by very little hemorrhage.

SAYER HASBROUCK: I am somewhat interested in the statements Dr. Lautenbach makes in regard to astigmatism and the uric-acid diathesis, but not surprised, as the doctor has a habit of taking one's breath away every once in a while by some astounding statements that make one feel that he has not carefully examined his patients. I confess it is not my habit to examine the urine

of all my cases of refraction, and no doubt I have overlooked the fact that all cases of astigmatism against the rule have uric acid in excess. I have just looked over the record of all my cases for the past three months and find 17 cases against the rule : 7 over one diopter and under two, 10 over 0.25 diopter and under 0.75 diopter ; ages fifteen to seventy-seven. All except two had good general health ; and of the two who had poor health only one, I find, has an excess of uric acid. Tscherning says : " It seems that astigmatism against the rule becomes more frequent with age, and that astigmatism with the rule changes into astigmatism against the rule, under the influence of an increase of tension." This last fact I have noticed in a very marked degree at times. One case of glaucoma before the attack had $+1.25$ Dc. $80^\circ = \text{vis. } 1$; after the attack, which was treated with eserine, it was, and has remained for twelve years, -3.75 Ds. $\subset 2.00$ Dc. $160^\circ = \text{vis. } 0.9$. I agree, in a way, with Dr. Lautenbach that glaucoma many times follows a low state of physical health. This is touched upon by Dr. de Schweinitz in his paper at the November meeting of the section on ophthalmology of the College of Physicians of Philadelphia : " A Word Concerning the Ætiological Relationship of Epidemic Influenza to Chronic Glaucoma." But to return to the first statement made by the doctor, that astigmatism against the rule is more apt to be found in cases of uric-acid diathesis, I confess that I see no reason to agree with the statement, even though it may have occurred in the series of cases that the doctor happened to examine. While looking over my records for the past three months, I was surprised to note how many cases of oblique astigmatism were associated with poor physical conditions. I have no doubt if these were tabulated a large majority might show an excess of uric acid, but that would not convince me that there was any kinship between the uric-acid diathesis and oblique astigmatism.

DAVID W. WELLS: When it is claimed that the resulting astigmatism is always *against* the rule, with the inference that such a condition of the refraction is pathognomonic of lithæmia, we should be informed what percentage of astigmatics *with* the rule are in the " lithæmic condition." Keratometric measurements and the results of skiascopy under cycloplegia should also be presented.

BUSHROD W. JAMES : I have not traced these irregular cases directly to the diathesis. I have examined them a number of times, with different results at each examination, and have usually attributed them to some irregular action of one or two of the ciliary muscles upon the lens. My plan is to treat them medicinally, until I can get a definite result several successive times with regard to the axis; after which I select a glass, letting the patient understand that a change may be required in the near future, and I keep the case under observation to note any changes. I have found the best remedies for these cases to be *argentum nitricum*, *hyoscyamus*, and *rhus tox.*, given according to the majority of symptoms.

LEIGH Y. BAKER: While I have frequently met with astigmatism against the rule, nothing has heretofore led me to associate the condition with an uric-acid diathesis. I have at present a case where careful refraction shows O. D., -0.50 Dc. 90° ; O. S., $+0.25$ Dc. 180° ; but this fact did not lead me to ask for an examination of the urine, the report of which I am now awaiting. I have seen astigmatism against the rule change to the rule, and I have also seen a myopic astigmatism at 90° change to a hyperopic at 180° ; but the diathesis in this case, I can say absolutely, was not uric-acid.

J. W. JEWETT: I have had quite a number of cases of astigmatism against the rule, but have never examined the urine. My own ocular trouble is of that character, but, as far as I know, I am not lithæmic. A short time ago, when I was examined for insurance, my urine was decidedly the other way—alkaline, and of low specific gravity.

ISAAC C. SOULÉ: Have noticed a certain irritability occasionally manifest in patients having this diathesis, but have never noticed any change in the astigmatism, when present, from the correction of the uric-acid diathesis; and as I have invariably corrected all refractive abnormalities under scopolamin with retinoscopy, putting on a full correction, I should think there would have been complaint of asthenopia, had such a change taken place.

E. H. LINNELL: I doubt very much whether uricacidæmia can influence the nutrition of the cornea sufficiently to cause

astigmatia. That it may be one factor in a general cachectic condition is admissible, but in my experience changes in the corneal curvature as a result of malnutrition are extremely rare.

Is Closure of Old Perforation in the Membrana Tympani by Irritation Dangerous or Advisable? When? Why?

HENRY C. HOUGHTON: The closure of old perforations of the drumhead is dangerous or otherwise, according to the conditions which exist when the closure is attempted. In suppuration of the middle ear with profuse formation of pus, the opening must be maintained. In cases of slight flow of pus, but marked by tendency to masses of inspissated pus and cholesteatoma, it would be reprehensible to attempt the closure of a perforation. On the other hand, given a case of suppuration of the middle ear in which the acute stage has been passed, and the secretion of the lining membrane is more mucoid than purulent, then closure of the perforation is to be desired; as the function of audition is improved, and the menace of acute disease of the middle ear is made less. In order to secure this change of nature of the middle-ear secretion, I know of no method of instrumental treatment to compare with pneumomassage: the passage of a measurably continuous stream of air through the nares, upper pharynx, eustachian tube, middle ear, perforation of drumhead, and external auditory canal, causes a gentle suction on contents of attic, antrum, and cells; and a modification of the purulent process is the result. Two years ago I should have said that this new method of massage was of more special value in catarrhal disease. Now I say that it is of equal, if not greater value in suppurative disease, because we remove the menace to life to a greater distance.

E. H. LINNELL: The closure of an old perforation is dangerous, so long as suppuration or necrosis exists. It is advisable when suppuration has ceased or nearly ceased, and when the tympanic cavity is in a healthy condition and in the absence of disease in the attic and antrum. When indicated, tri-chloroacetic acid, as used in Politzer's clinic in Vienna, is the best irritant to use. It must not be used, however, when the membrane is totally destroyed. In other words, it must not be applied to the bony margin of the drum, the annulus tympanicus.

BUSHROD W. JAMES: If there is any tendency to recurring catarrhal trouble in the middle ear, the perforations should not be closed; but if an old perforation should exist without catarrhal symptoms recurring, I do not deem the closure dangerous but advisable, and have so acted in a number of such cases.

G. DE WAYNE HALLETT: Closure of *old* perforations of the membrana tympani is seldom desirable, because with the opening hearing is usually better; vibrations then having direct access to the foot-plate of the stirrup and the round-window membrane. The remainder of the membrane is usually opaque, hypertrophied, or calcified, and a poor conductor.

ISAAC C. SOULÉ: If the mucous membrane of the tympanum is in a healthy condition and care is taken not to cause too much irritation of the Mt., I believe it good practice.

LEIGH Y. BAKER: Closure of an old perforation in the membrana tympani by irritation is advisable when the eustachian tube is in a perfectly normal condition; when patulous, closure by irritation is sometimes attended with danger.

J. W. JEWETT: When is it advisable to close an old perforation? Not until there is no more discharge from the tympanic cavity, and there has been no recurrence of the original difficulty; then, and only then, is it safe to close an old perforation. The only reason why an old perforation should be closed up is to prevent the introduction of new disease germs to a moist mucous membrane and a good soil for their development. With the only route to the tympanic cavity through the mouth and the eustachian tubes, there is much less chance for them to gain an entrance to the middle ear and set up any mischief there. Yet, in many cases of deafness from catarrh of the middle ear and ankylosis of the ossicles, the drum membrane has been removed with the malleus and the incus, for the express purpose of improving hearing. This, in cases where the stapes was in position.

Is Hydrogen Dioxid Deleterious to the Mucous Membrane of the Ear? If so, When and Why?

HENRY C. HOUGHTON: I have abandoned the routine use of hydrogen dioxid. While it is valuable in certain suppurations, it

is not so in cavities like the middle ear or the external auditory canal; its action on pus leaving a large amount of detritus which becomes a cause of irritation, tending to perpetuate the condition for which it is used.

G. DE WAYNE HALLETT: Hydrogen dioxid has never seemed deleterious to the mucous membrane of the middle ear in my treatment of diseases of that organ.

I have always, and do always use it in otorrhœa. It cannot be depended upon to clean away all pus. When there is a considerable perforation the syringe is necessary to search out, with a good stream of water, and clean all pockets and corners of detritus and pus.

Dry the surfaces and follow with H_2O_2 . Dry again, and then use what may seem necessary: boric acid in saturated solution of equal parts water and alcohol; formalin 1-500, or upward; bichromate potash in saturated solution; dry boracic acid, or 50 per cent. enzymol.

ISAAC C. SOULÉ: If the hydrogen dioxid contains an appreciable amount of free acid, I have found it to act as an irritant in acute suppurative conditions.

E. H. LINNELL: I have used hydrogen dioxid in suppurative conditions of the middle ear for many years, with only favorable results. I do not think it is ever injurious to the mucous membrane.

J. W. JEWETT: There is some danger in using hydrogen dioxid in the middle ear, from the well-known bleaching properties that it has. There is an astringent action in its use that, if too long continued, will have a tendency to contract the capillary vessels of the mucous membrane of the tympanum; shutting off the blood supply and preventing healing. As a cleanser it is all right, but I think that much better results can be obtained in the way of a germicide, by using the bichloride of mercury.

LEIGH Y. BAKER: I have never seen the careful use of hydrogen dioxid prove deleterious to the aural mucous membrane.

BUSHROD W. JAMES: I have never noticed any injurious or ulcerative results to the mucous membrane of the ear.

The Complete Mastoid Operation.

Sir William Dalby, in a paper before the Royal Surgical Society, said of *the complete mastoid operation*:

First: That the cure of chronic otorrhœa could not be effected by a simple opening of the mastoid; that the tympano-mastoid operation, which involves surgical damage to the tympanic structures, is not applicable or justifiable in acute cases, and in regard to chronic otorrhœas he says they should be treated by two operations.

(1) The operation for the removal of all disease, viz.: the complete tympano-mastoid operation.

(2) This bone wound should be covered by epithelial grafting covering the whole cavity.

As to the indications for the operation, he says that it is immediately necessary in the following: (a) Cases in which septicæmia has commenced. (b) Cases in which there are dead and carious bone in the tympanic cavity accompanied by ominous symptoms often repeated. (c) Whenever there is evidence of mastoid disease of long or short standing.

In conclusion, I believe that otorrhœa should never be considered lightly. It should in every case be looked upon from the standpoint of the complications that might arise, which are either ruinous to the hearing function or likely to destroy the patient's life.

HENRY C. HOUGHTON: As to the "radical operation" for extension of middle-ear disease to osseous structures, we can be more conservative than our colleagues of the old school, because we have remedies to control acute conditions; but we must be on our guard not to overlook those symptoms which constitute the danger line, beyond which lies dissolution. It is also true that, after operation, our prognosis can be more hopeful, because our remedies act to promote resolution and guard against after-complications. Still it remains true that we are liable to be caught in the tide of radical destructive surgery, and we must not lose our foothold.

LEIGH Y. BAKER: There is one point which cannot be too greatly emphasized—not to regard too lightly *any* case of otorrhœa. Each case contains within itself the possibilities of a grave termination.

Bezold's Complication of Suppurative Mastoiditis.

Mr. Ernest Waggett read a paper to the British Medical Association on *Bezold's Complication of Suppurative Mastoiditis* (The Lancet, August 25, 1900).—Escape of pus, he said, from the mastoid cells into the digastric groove was not extremely rare, but the following instance was worthy of attention on account of certain diagnostic features which were unusual, while points in the history of the case raised questions of practical value. The patient was a man, aged thirty years, with muco-purulent otorrhœa of three months' duration. A minute perforation of the anterior inferior region of the drumhead was enlarged by linear incision, and antiseptic treatment was prescribed coupled with repeated Politzerization. Three weeks later the patient returned with true pus issuing from the perforation, which had assumed its former minute dimensions. Occipital pain was present, but no local tenderness. Incision of the drumhead was repeated. Within twenty-four hours an area of œdema developed over the site of the exit of the mastoid vein from the posterior aspect of the mastoid process. Sinus phlebitis was therefore suspected, but within a few hours swelling and œdema appeared in the situation of the infra-auricular gland behind the maxillary articulation, and a diagnosis of suppurative adenitis was made. Positive evidence either of mastoid suppuration or sinus phlebitis was completely wanting. An attempt was made to exclude Bezold's complication just before operating, firm pressure being exercised over the external swelling while the perforation was observed through the speculum. After such pressure had been exerted for about twenty seconds pus was seen to spurt from the perforation, establishing the diagnosis of Bezold's complication. The mastoid operation was performed and the greater part of the mastoid process was removed. A small fistula piercing the roof of the digastric groove was found leading to an abscess cavity which extended forwards from under cover of the digastric muscle. The mastoid cells were filled with inodorous pus and evidence of caries or necrosis was wholly wanting. Recovery was rapid, uneventful, and complete. The points of interest raised by this case might

be enumerated as follows: (1) Repeated Politzerization coupled with the untimely reunion of the incision in the drumhead evidently served to inject the muco-pus into the antrum and to convert a case of simple tympanic disease into a serious mastoid suppuration. Politzerization should never be practiced in these cases unless the tympanic cavity was observed to be in very free communication with the meatus. (2) In some individuals the outer walls of the mastoid cells were sufficiently thin to be ruptured by the pressure of retained pus without the aid of caries or necrosis. In this instance repeated inflation of a valvular system of cavities might have accelerated the rupture into the digastric groove. (3) Tenderness and œdema as observed in this case at the posterior end of the digastric groove (simulating phlebitis of the mastoid vein) should prove a valuable sign of the commencement of the complication. Statistics as to its occurrence were desired. As a rule Bezold's complication was only diagnosed when a large abscess in the neck had developed. (4) The simulation of infra-auricular adenitis was very unusual, the pus as a rule tracking downwards along the course of the great vessels. In testing an infra-auricular abscess by Bezold's experiment it was essential for the surgeon to keep his eye upon the tympanum whilst he exerted digital pressure, for collections of pus in this situation sometimes communicated directly with the lumen of the meatus and the experiment might lead to an erroneous conclusion unless the above-mentioned precaution was taken. (5) In this case the pus did not spurt through the perforation until pressure had been exerted for some twenty seconds. A case was cited in which prolonged pressure would probably have produced intra-cranial mischief. Momentary pressure will be of no value where pus had to be propelled along a narrow tortuous passage; nevertheless, the question of safety imposed a limit to the duration and degree of digital pressure to be employed.

ISAAC C. SOULÉ: Unless the perforation is low down in the posterior quadrant of the M. T., and at least $\frac{1}{8}$ -inch diameter, Politzeration is contra-indicated. Instead, suction with some kind of an exhaust syringe should be used to free the tympanum of pus.

I have seen two cases in past two years resembling author's, but in only one was Bezold's experiment successful. One was in child less than five; the other in adult about forty. Abscess was under digastric muscle in both.

SOCIETIES.

Abstracts, with discussions, of the more interesting papers presented at recent meetings.

AMERICAN MEDICAL ASSOCIATION, SECTION IN OPHTHALMOLOGY,
JUNE, 1900.

Immature Cataract and its Treatment, by G. E. de Schweinitz.

The writer concluded that : 1, certain lenticular opacities, most often situated in the naso-inferior quadrant of the lens, occasionally are practically stationary and may be designated "non-progressive." They do not handicap the patient's ocular abilities, and may with propriety be separated from the class to which the name incipient cataract is ordinarily given.

2. Certain lenticular opacities undoubtedly depend on what may be designated "disturbances of the choroid," as apart from active and actual choroiditis ; their progress is sometimes apparently checked by measures—optical, local, and general medicinal—which restore the choroid coat to normality. Such measures do not, however, remove from the lens the opacities which have already formed when the patient comes under treatment.

3. Certain lenticular opacities associated with diabetes mellitus, nephritis, lithæmia, and arteriosclerosis—particularly the last two diseases—are sometimes apparently retarded, like those in No. 2, by measures which are suited to the patient's general condition in connection with local and optical therapeutics ; but these measures never dissipate them.

4. Certain lenticular opacities produce not only prodromal myopia, but a very high degree of astigmatism, the correction of which may result temporarily in a surprising improvement in visual acuity.

5. Certain lenticular opacities cause an obscuration of vision that may be largely dissipated temporarily by providing the patient with glasses moderately tinted, which give the best visual acuity during mydriasis, and by maintaining this mydriasis with a mild mydriatic. Sometimes, under these circumstances, the mydriasis seems to hasten maturation : this fact should be explained to the patient.

6. Certain lenticular opacities, especially in the form of striæ

of refraction, cause an obscuration of vision which is somewhat relieved by maintaining a mild myosis with weak solutions of one of the myotics.

7. If the vision of eyes suffering from incipient cataract of the nuclear type is improved by mydriasis, this is not a sufficient indication for optical iridectomy, unless the patient finds by observation that the increased visual acuity, as noted by test-type examination, is also advantageous in pursuing his ordinary occupation.

8. The extraction of unripe cataracts is preferable to any of the ordinary operations for ripening cataract.

9. There is no evidence that electricity has the slightest influence in checking the rate of progress of incipient cataracts or in dissipating the opacities which have formed.

10. If there is any evidence that massage of the eyeball favorably modifies the rate of development of cataract, it is still very insufficient ; there is some evidence to show that massage sometimes hastens the opacification of the lens. The subject demands further investigation.

11. There are no "specific remedies" for the treatment of cataract, and there is no reliable evidence that drugs exist which cause the absorption of partially or fully formed cataracts.

12. All lenticular opacities, unless perhaps those which belong to the so-called non-progressive group, should be regarded as indications for a thorough investigation of the patient from the general as well as the ocular standpoint, and for an employment of remedial agents—optical, local, medicinal—according to the findings.

Discussion.

S. D. RISLEY : In non-progressive senile cataract it is fair to presume that in the past there had been choroidal disturbance which had gradually subsided when the light had been partially excluded and the eye permitted to rest ; consequently, the opacity did not mature. "Where an opacity is formed in the lens you may rest assured that it will remain there." "Of twenty-five operations to ripen cataract a few seemed to ripen rapidly, but when I tried to extract the lens the posterior cortex was found unaffected. When the lens cortex was affected by the rubbing

the subsequent extraction became difficult, because of adhesion of cortex to the capsule."

W. H. BATES : Three years ago I sent a patient seventy years old to Dr. James E. Kelly for general treatment, with V. 15/200 from lenticular opacities. In three months she returned, having V. = 15/10 and positively no opacity of the lens. She still has the same vision and no opacities. I have seen a second case in which, under the treatment of Dr. Kelly, lenticular opacities entirely, and a third in which they partially, disappeared. He gave the patients water, at least three quarts a day, and exercises.

J. L. THOMPSON narrated a case of a man with a very white cataract. About fourteen years later a preliminary iridectomy gave a little vision, through a clear peripheral space. A year later he used eserine for pain and in a month the lens disappeared ; the capsule is now filled with water—you can see the red reflex.

G. O. RING reported absorption of an incipient cataract accompanying double optic neuritis by active antisyphilitic treatment ; it was clearly a specific case. V. rose from almost nothing to 20/20 and about 20/30.

I. R. GRIDLEY CASE had carefully tried Kalish's treatment in four cases : (1) traumatic cataract, no effect ; (2) congenital, no effect ; (3) senile, more rapidly progressive than usual at that age ; (4) senile, it remained stationary until the patient's death.

G. E. DE SCHWEINITZ : Opacities in the nasal quadrant are sometimes nearly non-progressive, a variety that is associated with a corresponding patch of retino-choroiditis that does progress. There is some reason to believe that we can, by proper treatment, help people with immature cataract.

Treatment of Immature Cataract, by John E. Weeks.

In the main his views harmonized with those of Dr. de Schweinitz. Traumatic partial cataracts, with or without perforation of the capsule, sometimes become stationary ; and in a few cases the opacification partly disappears. Cataract may be hyperplastic and degenerative, or simply a degenerative change in the lens structure. Cataract which forms during the course of an intraocular inflammation or neoplasm not infrequently presents a swollen appearance, a thickened capsule, and a multiplication of epithelial cells. The epithelial cells form in masses on the posterior surface of the anterior capsule, produce cystoid

cells at or near the equator of the lens, and sometimes more or less completely cover the anterior surface of the posterior capsule. This form of cataract is sometimes spoken of as inflammatory, but this is plainly a misnomer, since its development is due to perverted nutrition only. In traumatic cataract, with infection of the lens substance, a multiplication of germs takes place in the lens accompanied by an infiltration of small cells and a disintegration of lens fibers. In no other condition will we find a true phakitis.

Medicinal treatment should be local and constitutional, and does not differ, because of the presence of opacities in the lens, from that which would otherwise be employed. Its influence on the lens structure is not to clear up existing opacities, but to prevent further opacification by improving or by preventing further impairment of the nutrition to the lens.

Attempts to improve the nutrition of the lens are perfectly legitimate, to prevent further opacification. He is of the opinion that massage of the eye is not of much value as a preventive, and that the beneficial results to be obtained by electricity are disproportional to the time and expense necessary to its proper application.

It is well known that cataract in some cases remains stationary for a varying length of time. Because of this it is difficult to ascertain what benefit is derived by treatment directed to the arrest of the development of cataract. Only by observing a relatively large number of cases, and comparing those treated with similar cases not treated, will we be able to decide the value of any course of medication. I have been directing some of my patients with incipient cataract to employ stimulating collyria and moist heat to the eyes, for the purpose of ascertaining what influence this treatment would have on the development of the cataract.

In non-progressive cataract optical iridectomy is advisable only if vision can be made 20/40, or better. In all other cases of cataract where the fundus is normal the removal of the lens is necessary.

In operating for the removal of immature cataract a number of procedures are open to us: In young individuals, needling of the lens, with or without subsequent extraction of the broken-up lens substance by means of small linear incision in the cornea;

preliminary iridectomy, with or without direct or indirect trituration of the lens, for the purpose of hastening the maturity of the cataract, applicable to old or young individuals ; extraction, either simple or combined.

But I have abandoned the ripening operations, because the facility of removal was not sufficiently increased to warrant the extra risk and trouble to the patient. Whenever, in the development of cataract, the vision is reduced to such a degree that the individual cannot follow the ordinary vocations of life, provided there is any reason for not waiting until the cataract is mature, I do not hesitate to advise operation. The choice of the method depends upon the case.—*Jour. A. M. A., Dec. 8 and 15, 1900.*

ABSTRACTS FROM CURRENT LITERATURE.

Middle-Ear Disease in Its Relationship to the Cranial Cavity.—Otto J. Stein, in *Interstate Med. Jour.*, October, 1900.

A patient with ear suppuration is entitled to a clear exposition of the dangers he is living under; disease in this region means not only deafness, noises in the head, discharge and dizziness, but, when not properly treated, is apt to result in invasion of the cranial cavity and perhaps death. Other advice stamps his adviser as non-progressive, of antiquated ideas and limited ability. Next to trauma, ear disease is responsible for the greatest number of cases of brain infection and abscess. The surgeon now enters the brain cavity with the same fearlessness as the abdomen.

Suppuration of the middle ear is to be listed with the serious diseases; the longer it exists the more serious it becomes. Many cases of brain abscess have been reported as following close upon acute otitis. Meningitis, cerebral abscess, sinus thrombosis, and phlebitis, singly or in combination, may result from acute or chronic otitis, simulating typhoid fever, malarial fever, tuberculosis, or causing sudden death. Caries extending through the carotid canal may cause perforating ulcer of that artery; hence

a fatal hemorrhage. The particular site through which the invasion takes place is often of the greatest importance and assistance in seeking the exact locality of the complication; it may help differentiate between an abscess and sinus disease. The petro-squamous sinus, almost always persistent in childhood and often in the adult, is adjacent to the petro-squamosal suture; it carries all the intracranial venous blood previous to the formation of the jugular vein.

J. A. Andrews reported a case of arrested development of the bony floor of the middle ear, where the jugular vein lay in direct contact with the mucous membrane of the tympanum. In phlebitis and thrombosis of the cerebral vessels we are apt to have sudden high temperature, with rigors and perspiration. If thrombus of the lateral sinus extends down to the internal jugular, we have swelling, œdema, and pain in the neck and face, and often erysipelatous inflammation of the cheek and forehead. A case by Eulenstein proves that it may exist without the usual symptoms of a hard cord-like feeling in the neck, pain and œdema. Clot in the cavernous sinus causes œdema of the lids, conjunctiva, forehead, and nasal mucosa; at first limited to one side. Tinnitus and deafness may be symptoms of inferior petrosal sinus disease; if of the superior petrosal, there may be profuse recurrent epistaxis, with convulsions and sometimes unconsciousness.

J. L. M.

A Plea for Early Naked-Eye Diagnosis and the Removal of the Entire Organ, with the Neighboring Area of the possible Lymphatic Infection, in Cancer of the Larynx.—John N. Mackenzie, in *Jour. of Lar., Rhin. and Otol.*, October, 1900.

Omitting the consideration of the possible existence of a cancer bacillus and the possible detection of cancer through the blood and secretions, the following are the principal methods of diagnosing cancer of the larynx, in the present state of our knowledge. 1. Naked-eye method, or diagnosis by direct inspection, supplemented by clinical phenomena. 2. Thyrotomy. 3. The microscope.

As all agree "cancer is an infectious disease," the author very strongly opposes the removal of a portion of the growth for microscopical diagnosis under any circumstances, because (a)

"it subjects the patient at once to the dangers of auto-infection at the point of incision and to metastasis elsewhere; (*b*) it stimulates the local growth of the cancer, and (*c*) finally, the method is often inconclusive, misleading, and sometimes practically impossible.

"There is, unfortunately, no solitary unequivocal symptom or laryngoscopic sign of cancer." Nor are there unmistakable microscopical indications; therefore "every resource and refinement of clinical diagnosis should be resorted to" : . . and "take it all in all, it (naked-eye diagnosis) is by far the most practical of the three methods. Thyrotomy, which is gradually losing its terrors under modern asepsis, should be performed to enable better examination of growth, and then, if found necessary, the curative procedure of removal may be immediately accomplished, allowing less possibility of auto-infection.

"Early total extirpation of the entire organ with its tributary lymphatics and glands, whether the latter be apparently diseased or not, is the only possible safeguard against local neuroma and metastasis" . . . because, "as I have demonstrated, even after the removal of the larynx the disease may be apparent in one side of the organ and not in the other, and yet the microscope show extensive carcinomatous deposit in the seemingly normal side.

"Diffuse infiltration, even though confined to small area, should always awaken suspicion of the existence of the disease elsewhere in the organ."

PALMER.

The Rinné and Gellé Tests.—In the *Archives of Otology* Brühl comes to the following conclusions:

1. If the Rinné test is positive, then Gellé is unexceptionally positive, and the impaired hearing is due to nervous affections.
2. If the Rinné test is negative absolutely and totally, or up to c^1 , the Gellé test is unexceptionally negative, and the impaired hearing is due to a stapes ankylosis.
3. If the Rinné test is negative below or up to the c limit, and positive above it, then the Gellé test decides whether a stapes ankylosis exists or not.—*Treatment*, December, 1900.

Lycopersicum Esculentum (Common name, Tomato): Its Proving and Clinical Verifications.—

Herbert A. Roberts, *N. Amer. Jour. of Hom.*, October, 1900.

Eyes.—Eyes feel dull and heavy. Eyelids feel heavy and swollen. Eyes ache and feel sore and lame. Intense aching in eyes, and feeling as if the eyeball was being contracted. Pupils very minutely contracted. Light painful to the eyes. Keeps wiping the eyes in order to see clearly. Letters run together when reading. Eyes water on close work. Twitching in inner canthus of left eye.

Nose.—Profuse watery coryza excoriating alæ nasi; drops down into throat; of a saltish taste; markedly worse out of doors. Coryza thick, white, and tenacious. Intense itching in anterior chamber of nares, greatly aggravated by breathing the least dust; relieved indoors.

Mouth.—Itching and tickling in roof of mouth. Foul odor from mouth. Tongue coated thick and white, more in center. Foul taste.

Throat.—Slightly sore on swallowing. Constant desire to clear throat. Mucous membrane of pharynx pale; tip of uvula and arches of pharynx red and inflamed. Burning, raw feeling in right side of throat, changing to left side. Left side of throat slightly sore.

Voice.—Hoarseness towards night. Husky voice.

Cough and Chest.—Cough deep and harsh. Pain in chest, extending to vertex when coughing. Deep cough, starting from irritation in lower chest. Hoarseness, with constant tickling in pit of throat. Dry, hacking cough, coming on at night and keeping him awake after going to bed. Explosive cough. Hoarseness, with constant desire to clear throat. Oppression in lower chest, corresponding to lower right lobe of lung. Sense of oppression in chest. Expectoration white and in lumps. Expectoring early in morning, with more later in day. PALMER.

Detachment of Retina.—D. Parenteau, in *Revue Hom. Française*, January, 1900.

Cites, and confirms by two observations, Nuel's statement that partial detachment of the retina may result from simple choroiditis, leading to œdema, without myopia preceding. In his first

case decided improvement resulted from glonoin. 12 and belladonna 1 in alternation. The other remained stationary.

J. L. M.

The Production of Local Anæsthesia in the Ear.—
Gray, Albert A., *The Lancet* (London), April 21, 1900.

As the aqueous solutions of cocain and eucain are of little use to produce anæsthesia in the uninjured ear, probably because the terminal filaments of the sensory nerves lie in the inner layer of the tympanic membrane and surrounding surface tissue and the solution is unable to penetrate to them—the author made several experiments. Found that better anæsthesia was produced by dry powdered cocain, but this was not satisfactory. Finally he made the following for solution, which produced perfect anæsthesia: R̄ Cocain, 5 parts; dilute alcohol, 50 parts, and anilin oil, 50 parts. This fully annulled pain in removing polypi, curetting granulations, paracentesis, etc. One precaution must be taken: all débris must be thoroughly removed before application of solution, as the solution seems to precipitate a layer of albumin from pus, etc., which is impermeable to the anæsthetic. In cases of sclerosis of the middle tissue the above solution fails. R̄ Cocain, 10 parts; absolute alcohol, 30 parts, and anilin oil, 70 parts, is successful. It causes slight burning sensation.

PALMER.

The Lashes are Epilated Several Days before
Cataract Operation, by Schiötz.

This produces no reaction on sound lids, and the sprouting lashes are soft and fine.

Sympathetic Ophthalmia in Spite of Enucleation.—
Abadie, Jour. A. M. A., December 8, 1900, abstracting *Rev. Gen. d'Ophthalmol.*, September.

A case is described in which sympathetic ophthalmia recurred fourteen years after enucleation of the eye primarily affected. It resisted all treatment until conquered by injections of three or four drops of a 1 per cent. solution of mercury cyanid injected into the stump of the enucleated eye. The optic nerve had probably been invaded by the primary infectious process, but the infection had remained latent for years.

Successful Transplantation of the Cornea and Sclera.

—*Bost. Med. and Surg. Journ.*, October 4, 1900, citing Wolffberg in *Woch. für Ther. u. Hyg. d. Auges*, August 24, 1899.

A female lost the right eye from an injury in childhood, and lately injured the other by a blow causing dislocation of the lens, cataract, and iridocyclitis. The cornea became atrophied, and after the extraction only light perception remained. The eye of a sparrow was bisected and the part in front of the iris was used. As it seemed irrational to the operator to bring the anæmic sclera in contact with the anæmic anterior portion of the blind eye, an artificial hyperæmia was induced by undermining the conjunctiva around the cornea, then passing a thread, after the manner of a purse-string, along the border of the opening, and by its closure covering the atrophied cornea by some chemotic vascular conjunctiva. On the next day the cornea of the blind eye was trepanned ($3\frac{1}{2}$ millimeters) through its entire thickness without escape of vitreous. The sparrow's cornea, with its scleral border, was then introduced, and the border well tucked under the overlapping conjunctiva. Almost no reaction; sutures were removed at the end of five days. The transplanted sclera soon lost its opaqueness, and soon became as transparent as the cornea. The patient can now, at the end of a month, go about a well-lighted room unattended.

J. L. M.

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BOOK REVIEWS.

A HANDBOOK OF THE DISEASES OF THE EYE AND THEIR TREATMENT. By HENRY R. SWANZY, A. M., M. B., F. R. C. S. I.; Examiner in Ophthalmology to the University of Berlin; Surgeon to the National Eye and Ear Infirmary, and Ophthalmic Surgeon to the Adelaide Hospital, Dublin. Seventh edition, with 165 illustrations. Philadelphia: P. Blakiston's Son & Co., 1900. Pp. 607. Price \$2.50.

A good book; especially valuable for three tables of the actions and relative value of the principal mydriatics, myotics, and local anæsthetics used in ophthalmology, and for an interesting detailed description of Dr. Mackenzie Davidson's method of employing the Röntgen rays for the detection and localization of foreign bodies in the eye. We would like one or two illustrations of the localizer and a demonstration of how the various co-ordinates are determined. The subject of paralysis of the extrinsic muscles is more clearly, yet tersely, set forth than in most text-books. Ten pages of index, with liberal cross-references in the body of the book, add materially to its value.

J. L. M.

REFRACTION, AND HOW TO REFRACT; including sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-glasses, etc. By JAMES THORINGTON, A. M., M. D., Professor of Dis-

eases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine; Associate Member of the American Ophthalmological Society; Fellow of the College of Physicians of Philadelphia, etc. Second edition. 200 illustrations, 13 of which are colored. P. Blakiston's Son & Co., Philadelphia, 1900. Pp. 301. Price \$1.50.

This book is intended for all beginners in the study of ophthalmology, yet is especially for those practitioners and students who may have a limited knowledge of mathematics and cannot readily appreciate the classic treatise of Donders. The second edition followed the first in ten months. We regret that this teacher has ignored Dr. Georges Martin's correction in December, 1895,* of Rev. Dr. Whewell's error, and persists in the use of the old terms *astigmatism* and *astigmatic* instead of the more scholarly *astigmia* and *astigmatic*.

J. L. M.

A TREATISE ON MENTAL DISEASES; Based upon the Lecture Course at Johns Hopkins University, 1899, and Designed for the Use of Practitioners and Students in Medicine. By HENRY J. BERKLEY, M. D., Clinical Professor of Psychiatry in the Johns Hopkins University; Chief Visiting Physician to the City Insane Asylum, Baltimore. With frontispiece, lithographic plates, and illustrations in the text. New York: D. Appleton & Co., 1900.

The general practitioner and the student would wish some pains had been taken with definitions, and that the index were much more full and arranged in a less confusing manner.

J. L. M.

THE PHYSICIAN'S VISITING LIST (Lindsay & Blackiston's) for 1901. Fiftieth year of its publication. Philadelphia: P. Blackiston's Son & Co., 1012 Walnut Street.

Its half-century of existence is alone sufficient guarantee of its excellence and popularity.

J. L. M.

A MANUAL OF HOMEOPATHIC MATERIA MEDICA. By J. C. FAHNESTOCK, A. M., M. D. Published by the author, Piqua, Ohio, 1901. Pp. 264. In buckram, \$1.50; soft leather, \$2.00.

An excellent, terse compilation of the characteristics of our proven remedies in a condensed form; very readable, handy for the pocket, interleaved, and emphasizing the sphere of action of

* *Annales d'Oculistiques.*

the drug. The rubric captions are omitted, hence we specialists may at times have to search a little for the symptoms of the eye, ear, nose, or throat. This is a subject of congratulation, as it will tend to make us cover the totality of symptoms in our prescriptions. Under *kali bichr.* there is no reference to nausea, which is such an important symptom of this drug. The reviewer long since abandoned the first decimal trituration, because it repeatedly caused nausea when administered in 1-grain tablets for nasal or pharyngeal catarrh. Uranium nitric., which promises to be so valuable in atrophic pharyngitis and rhinitis, is not mentioned. We hope a second edition will soon be called for, and that therein the indications for *arg. nitr.* in ophthalmia neonatorum and gonorrhœica will be emphasized.

J. L. M.

CHIRURGIE OCULAIRE, par le Dr. ALBERT TERSON, ancien chef de clinique ophtalmologique à la Faculté de Médecine de Paris, 1 vol. in 48 de 540 pages, avec 129 figures, cartonné (7 fr. 50). Librairie J.-B. Baillière et fils, 19, rue Hautefeuille, Paris.

Therapeutic indications and descriptions of the operations are taken up in the usual anatomical order, and are followed by practical hints upon operating upon the cadaver and the pig's eye. A concise history of the evolution of most of the operations is an interesting and valuable feature.

J. L. M.

THERAPEUTIQUE OCULAIRE, Nouvelles médications, opérations nouvelles, par F. TERRIEN, chef de clinique ophtalmologique à la Faculté de Médecine de Paris. 96 pages avec 12 figures dans le texte. Librairie J.-B. Baillière et fils, 19 rue Hautefeuille, 1899, Paris.

An interesting, practical book. We note especially the methods of localizing a foreign body in the eye; methylin blue for inflammations of the cornea, especially serious ulcerations; oil collyria and intra-muscular injection of biniodide of mercury 0.12 cgm. in 30 cc. of oil for ocular syphilis.

J. L. M.

DISEASES OF THE EYE. By CHAS. H. MAY, M. D. Wm. Wood & Co., New York, 1900. Pp. 406.

"The author has endeavored to present a concise, practical manual of diseases of the eye, intended for the student and

general practitioner of medicine." The ordinary diseases of the eye are concisely and accurately described, and the more unusual conditions briefly mentioned. Colored plates of ophthalmoscopic conditions are given; also illustrations of instruments, technique, and diseased conditions. The book is practical, concise, and up to date, and fitted for the intended purpose.

R. I. L.

RHINOLOGY, LARYNGOLOGY, AND OTOTOLOGY, AND THEIR SIGNIFICANCE IN GENERAL MEDICINE. By E. P. FRIEDRICH, M. D., Privatdocent at the University of Leipzig. Authorized translation from the German. Edited by H. HOLBROOK CURTIS, M. D., Consulting Surgeon to the New York Nose and Throat Hospital, and to the Diphtheria and Scarlet Fever Hospitals. Philadelphia and London: W. B. Saunders & Company, 1900. Price \$2.50.

The author has treated the subject of diseases of the throat, nose, and ears in a manner which is unique in American, if I may not say all English, medical literature. Of course, single articles on a few individual portions have appeared; but not more. It is the relational or causal aspect that is predominant throughout; the relation of diseases of the special organs upon those of the general system, and *vice versa*, or, in other words, the effect of the one set of organs on the other. The extended reading, study, and close observation, especially the practical clinical experience in general medicine, evidenced in this volume, show the characteristic German thoroughness of the author.

The book shows the intimate interdependence in this wonderful human organism of every organ upon some other.

The scope of the book can best be judged by enumerating the chapter-headings. The inter-relationship of special or general diseases, and *vice versa*, is considered in from two to eighteen subdivisions in each chapter: I. Diseases of the Respiratory Organs. II. Diseases of the Circulatory Organs. III. Diseases of the Digestive System. IV. Diseases of the Blood. V. Chronic Constitutional Diseases. VI. Acute Infectious Diseases. VII. Chronic Infectious Diseases. VIII. Diseases of the Kidney. IX. Diseases of the Skin and of the Sexual Organs. X. Diseases of the Eye. XI. Intoxications. XII. Nervous Diseases.

Judging from the above, it fills a long-felt desideratum in English oto-laryngological literature.

I most heartily indorse a sentence in the editor's preface, to wit: "Friedrich has realized that the general practitioner must acquaint himself with the rapid advances in the modern teaching of oto-laryngology; and he has constructed a book so rich in statistics and references, so learned in its argumentative deduction, and at the same time so convincing in the manner of conservative presentation, that no specialist can afford to neglect the opportunity of acquainting himself with the subject-matter of this work."

A. W. P.

PRACTICAL HOMEOPATHIC THERAPEUTICS. Arranged and Compiled by W. A. DEWEY, M. D., Professor of Materia Medica in the University of Michigan Homeopathic Medical College; Member of American Institute of Homeopathy; Corresponding Member of the British Homeopathic Medical Society and of the Société Française d'Homéopathie; Author of "Essentials of Homeopathic Therapeutics," etc. Philadelphia: Boericke & Tafel, 1901. Cloth, \$2.50 net. By mail, \$2.70.

As the title says, this is a practical, up-to-date, strictly homeopathic therapeutics. While it does not include every drug that could possibly be given in a certain condition, still it gives all the newer little-used remedies that the author has found undoubted evidence of curing in certain maladies. These subsidiary remedies are usually given in the form of comparisons with the more commonly indicated ones; therefore in a form in which we can more easily recognize their field and be the more indelibly stamped upon our mind. For example, under "Colds and Catarrh," is the polychrest *pulsatilla*; compared with and differentiated from which are *penthorum sedoides*, *hydrastis*, *cyclamen*, and *drosera*. Also, under "Affections of the Eye," is the oft-used drug *bryonia*; with which are compared, *acon.*, *fer. phos.*, *terebinth*, *arn.*, and *ham. virg.* In the division on Affections of the Eye, are given the remedies indicated for glaucoma, blepharitis, ophthalmia, asthenopia, and cataract.

The index itself is a little gem, because it not only directs one to the contents of the book, but by its arrangement in heavy and light, and large and small type, it is a lightning reminder of principal drugs indicated in a certain disease, and the less frequently used ones in such position that it calls to mind which polychrest they most resemble.

A. W. P.

THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

EDITOR,
JOHN L. MOFFAT, M. D.

ASSOCIATE EDITOR,
A. W. PALMER, M. D.

THE RELATION OF THE SPECIALIST TO THE REPROVING OF THE HOMŒOPATHIC MATERIA MEDICA.

HERBERT D. SCHENCK, B. S., M. D., O. ET A. CHIR.,

Brooklyn, N. Y.

NOTHING has been more striking in the last quarter of the nineteenth century than the tendency to the division of labor in all departments of the industrial and professional world. This specialism has left its mark in the progress that is being made by those skilled workers by whom new problems and facts are constantly being evolved, old facts restudied in the light of the more perfect instruments and new collateral discoveries. Skillful observers and more accurate experimental research with the finely adjusted instruments of the present have led to many new discoveries in physiology and pathology in recent years. While our specialists have used their microscopes, ophthalmoscopes, and various instruments and appliances for analysis of the secretions and the blood in the settlement of the facts of physiology and pathology, nothing definite has been accomplished in adding to the scheme of the materia medica so ably planned and begun by Hahnemann. He and his immediate followers left medicine a precious collection of observations that have

been of incalculable benefit to the human race. We are using it to-day as they did, without attempting in any systematic manner to test and add to these facts what might be brought out by use of all the advanced methods of testing functional and pathological changes that are so common to-day.

What we need is to carefully scrutinize these grains of gold, and restate and illuminate them with the light of our present knowledge of all the collateral branches that may bring out more clearly and effectively the pure effects of drugs when tested according to the law of similia.

As Dr. Bellows well said in his presidential address before the American Homœopathic Ophthalmological, Otological, and Laryngological Society, last summer, we want "greater discrimination and accuracy in both the observation of whatever drug effects may be developed; a more perfect elimination of all sources of error in confusing drug effects with constitutional disturbances or temporary derangements of health from other causes; a restoration of the natural sequence or grouping of drug effects as indicated in the different organs and tissues of the body, and, as a result of all of this, the presentation of a definite, precise, and sharply defined statement of the pathogenic sphere and mode of action of each remedy studied. The effort of the past has been to expand our materia medica by the accumulation of many varied symptoms, with little check upon the imagination. The effort of the future should be to eliminate and condense with scientific and judicial accuracy."

In the provings of the past laymen and physicians have made statements, when taking drugs to get the pathogenetic effects, which it was not possible to test with our special instruments of to-day and without that careful examination and judicious questioning upon the part of the director that is so essential to promote the greatest accuracy.

Homœopathic specialists not alone of the eye and ear, but of the various other organs, are interested in this reproof of our materia medica more than general practi-

tioners for two reasons: First, because every specialist has felt the inadequacy of the symptoms as they are now recorded. They do not define clearly the organ or part of the organ affected and lack that objective examination that serves to supplement the statement of the subjective symptoms and define the exact position of the lesion. It has been insisted upon that the subjective symptoms are the most important in making the prescription, and that little more is needed to get the true similia. This is fallacious in many cases and will often lead to grave errors. Two or three years ago a patient consulted me regarding an increasing difficulty she had experienced the past few months in seeing clearly at the reading point, and with some feeling of dryness and as if a foreign body were in the eye. These subjective symptoms were found to be due to dryness of the cornea and conjunctiva owing to partial paralysis of the facial nerve which very much limited the movement of the lower lid. This paralysis was found to be due to a necrotic condition of the walls of the facial canal as it passed through the middle ear, and the whole trouble with the eye was cured by getting rid of the disease in the middle ear. Prescribing on subjective symptoms alone, or relying mainly upon them, would in such a case be disastrous to the patient. Again, a patient with tinnitus and deafness consults us, and can we determine without a careful objective examination whether it is due to disease of the middle or internal ear or to a foreign body in the canal—it may be some hardened cerumen pressing upon the membrana tympani? How much benefit would one derive from a prescription of medicine alone, in case it were a foreign body?

That brings up the second reason why homœopathic specialists should be particularly interested in reproving our materia medica. Their skill in the use of the instruments of precision in their chosen line makes it absolutely necessary that their aid should be invoked to carefully examine all the organs and secretions of the provers, not alone during the proving, but before any drug is administered, so

that the exact physical condition may be recorded, and fine shades of change noted, functionally and pathologically, in the various organs. For example, it is absolutely necessary to know the acuteness of vision and the condition of the various coats of the eyeball before we can say scientifically that the changes during the proving were due to the drug or were previously present.

Nothing demonstrates how much can be added to our exact knowledge of the sphere of our drugs as the collection that has been made by the special surgeons of our school who were associated with the Ophthalmic Hospital when it was first turned over to homœopathy from the old school. By careful prescribing and recording of the symptoms and results in cases where the ophthalmoscope and other instruments of precision supplemented their careful collection of subjective symptoms, they were enabled to add to the symptomatology of each drug a carefully drawn clinical picture of its action, which has made their work a priceless boon to thousands suffering with the various diseases of the eye wherever homœopathy is practiced. Many an eye has been saved from blindness through the use of these observations, which so carefully sifted the drug pathogenesis.

As our materia medica is not so rich in its symptomatology of the ear, throat, and most other organs, no such satisfactory compilation of drug effects as this one of the eye has been possible. If our workers could be furnished with a reproof of our materia medica that would give them an accurate basis for arranging the drugs useful in their special lines, no doubt our literature would soon be enriched with such a working materia medica.

Hence it seems that any scientific method of drug proving must have the provers subjected to a thorough physical examination before the proving is undertaken and should be under the guidance of men who are able to give each a careful special examination and judicious questioning during each proving. This requires that provers' boards be made up of bodies of specialists who will look after the details in

their special lines, while the director of the proving needs to be a man of wide experience as a general practitioner, at present or before he undertook special work. Only one of ripe scholarship, with a good knowledge of the materia medica in its broadest sense and of such breadth of view that nothing will warp his judgment, can fill such a rôle and be in position to direct his provers, when it seems necessary for scientific accuracy, to the experts in blood, or urinary analysis, or possibly for bacteriological examination or such physiological tests as will give the most complete result.

In order to conduct a proving in this manner it must be undertaken in cities where these boards of specialists can be organized, or at our medical colleges, where laboratories are at hand for this work and possible material for provers may be found. A scientific proving of the kind outlined can only be undertaken by men and women of intelligence and enough leisure to spare the time for the special examinations and to record their symptoms. Very few of the required standard can be had without payment is made for the service, which brings into consideration the part that must be played by the profession outside the cities. They can in their local and State organizations appropriate, collect, or contribute individually, or get wealthy laymen to do so, the money for the necessary expenses, for the payment of provers and for laboratory material. The boards of specialists will serve without compensation, no doubt.

To test the value of this plan the O. O. and L. Society took up the recommendation made by Dr. Bellows from which the previous quotation was made and from which the facts here presented have been taken, and decided to have the doctor choose a preparation for a reproving and to appoint committees composed of the members of the society residing in several of the cities, to organize among their professional brothers boards of specialists, with a director and one or two assistants to aid him in the examination of the provers. They are also to agitate the matter in their local, State, and other societies, so that

money may be contributed to pay the provers employed in each city. Dr. Bellows has consented to act as general director of these various committees and to supervise and consult with them in undertaking the work.

The following were the committees appointed:

New York.—Drs. John B. Garrison, Charles Deady, Irving Townsend.

Brooklyn.—Drs. John L. Moffat, Herbert D. Schenck, Alton G. Warner.

Chicago.—Drs. C. Gurnee Fellows, J. H. Buffum, Charles J. Swan.

Philadelphia.—Drs. Bushrod W. James, Charles M. Thomas, Henry S. Weaver.

St. Louis.—Drs. James A. Campbell, J. Martine Kershaw.

Boston.—Drs. George B. Rice, T. Morris Strong, David W. Wells.

Baltimore.—Drs. Charles Leslie Rumsey, Thomas L. Shearer.

Cincinnati.—Drs. Thomas M. Stewart, Robert G. Reed, Ella G. Hunt.

Buffalo.—Drs. F. Park Lewis, Fred D. Lewis, Frank B. Seitz.

Cleveland.—Drs. W. A. Phillips, G. H. Quay.

Detroit.—Drs. D. A. Mac Lachlan, Harold Wilson.

Washington.—Drs. William R. King, J. B. Gregg Custis, Marvin A. Custis.

San Francisco.—Drs. A. C. Peterson, Hayes C. French.

As soon as the preliminary organizations are completed work is to begin in order that a thorough test may be made of the efficiency of this method and a preliminary report made at the meeting of the O. O. and L. Society next June. Already the Brooklyn committee have taken up the work of interesting the specialists and others necessary to complete its board for the actual experiment, as soon as provers can be found. Through its efforts the Homœopathic Medical Society of the State of New York has made an appropriation for the general work, and some individuals are ready to contribute. The county society

has also been apprised of the plan and promptly voted all the funds asked for.

If these committees take hold of this reproof as enthusiastically as its importance seems to demand, it will not be long before boards will be organized pretty generally in our cities, and this great work be pushed with a thoroughness and with results that must convince any mind open to conviction with scientific facts that the law of *similia similibus curentur* is the only system of therapeutics that approaches a scientific basis.

241 McDonough Street.

CORRECTION.

ON page 84, 5th line from the bottom, of our last issue, 0.12 cgm. should read 0.12 gm.

AIDS IN SELECTING THE SIMILLIMUM FOR EXTERNAL DISEASES OF THE EYE.

J. E. MANN, M. D.

Louisville, Ky.

TO prepare an article on a special subject, for a journal devoted to a specialty, that will prove of interest to all readers is a specially difficult task.

There is one tie that binds the general to the special homœopathic practitioner, one common ground where they can meet and fraternize with mutual improvement and good feelings—this ground is therapeutics.

In every case of external disease of the eye there presents a combination of some of the following cardinal symptoms: photophobia, lachrymation, discharge, swelling, pain, inflammation; ameliorations, aggravations, and intensity of symptoms.

Discharge, by which is meant any secretion differing from normal tears, is bland or excoriating, and in either event may be thin or thick. And similarly, as seen in the accompanying table, the other symptoms may be divided.

Belladonna is the remedy most commonly thought of for photophobia, but in reality photophobia is most marked in conium.

Everyone realizes the importance of the ameliorations. A rhus tox. eye will never be worse in the morning nor better from heat.

Intensity of a symptom has reference to the amount or degree of annoyance or suffering complained of in proportion to the objective appearance. The conium eye

PAIN		INFLAMMATION						<i>Intensity of Symptoms</i>
<i>Neuralgic</i>	<i>Inflammatory</i>	<i>Serous</i>	<i>Fibrinous</i>	<i>Interstitial or Purulent</i>	<i>Ulcerative</i>	<i>Ameliorations</i>	<i>Aggravations</i>	
From nerve injury	Heat, burning, dryness	First stage				Day, cold, perspiring	Night, heat, motion	Restless, well marked
	Burning, smarting	Marked				Night, cold	Eve., warmth	Pronounced
	Stinging	Marked	Exudate			Cold water, air	Cold weather, night	Well marked
	Biting, itching			Most purulent		Cold air and water	Warmth	Lack of subjective symptoms
	Dry, burning				Irritable ulcers	Dry warmth	Night, cold	Pronounced
	Aching from without in				Dense tissues	Cold, wet weather	Pressure, warmth	Marked
	Throbbing	Moist stage		Marked interstitial		At rest, warmth	Motion, eve.	Pronounced
	Not marked		Chronic	Chronic		Dry, warm weather	Cold, light, wet weather	Subacute
	Not marked		Non-inflammatory	Induration	Nerve irritant	Dark, warm weather	Cold air, light	Photophobia intensified
	Itching, biting	Marked		Marked purulent		Cool air, dark	While being examined	All marked
	Not marked			Pustular	Fissures	Dark, warmth	Light, cold	Chronic, but marked
	Throbbing, boring			Suppurative marked	Acute, round	Morning, heat	Night, cold	Active, intense
	Tearing, tensile		Membranous, deep	Pustular	Non-irritating	Night, cold	Heat, day	Pronounced
	Not marked		Membranous	Marked	Irritable	Eve., heat	Morning, cold	Not active
	Deep, boring					Day, dark, even temperature	Night, extremes of heat and cold	Pronounced
	On looking down			Pustular	Of cornea, fissures	Noon, cold	A. M., heat, periodical	Pronounced
	Sticking		Membranous	Purulent	Of cornea	Cold outdoors	Warmth	Not intense
	Not marked	Marked		Marked		Cold	Warmth	Discharges marked, tearful eye
	Not marked	Marked		Post operative		Day, heat	Night, wet, weather	All intense
	Piercing, sticking			Pustular	Chronic	Day, heat	Open air washing	Subacute

cannot bear a ray of light, yet there is no swelling and but very little, if any, redness; on the other hand, the kalis and silicea may have considerable ulceration with but little annoyance to the patient.

The family physician is apt to undertake the treatment of external diseases of the eye, *i. e.*, those wherein the ophthalmoscope is not required for diagnosis. To help him or the specialist to select the simillimum the following table is submitted. The picture of arsenicum, for instance, taken from the chart and clothed with the knowledge requisite for the ordinary prescriber would read as follows: Intense photophobia. Profuse, hot, scalding lachrymation excoriating edges of lids and the cheeks. Fiery redness of conjunctiva with sensation of dryness and great burning. Non-inflammatory œdema of lids. Superficial destruction of tissue, hence ulceration. Worse at night, and from cold applications. Better in daytime, and from warm applications. Symptoms all well marked and equally well complained of.

These headings or classifications, except the first two, can be observed with nearly uniform success in selecting a remedy for any disease.

OIL COLLYRIA.

DR. F. TERRIEN.

Paris.

(Translated from "Thérapeutique Oculaire"¹ by John L. Moffat, M. D.)

THE inconveniences of the aqueous collyria—difficulty of preservation, lachrymation, and orbicular spasm incident to their application—had constrained certain ophthalmologists to abandon their employment. For a long while M. Panas used pomades of atropin and of eserin in cataract operations in order to avoid a spasm of the orbicularis, which at the time of the first dressing might rupture the still weak cicatrix or provoke an accident (escape of vitreous, etc.) if the collyrium were instilled immediately after the operation, as is habitually done with eserin. But these pomades are sterilized with difficulty and most often the mass is not homogeneous; one part being too rich in active matter, to the detriment of another which contains scarcely any. This led M. Scrini, upon the suggestion of M. Panas,² to study the action of oil collyria as substitutes for aqueous collyria³; the results obtained first in animals and confirmed in man have been satisfactory in every respect, and those have replaced aqueous collyria in the ophthalmic clinic of the Hôtel Dieu.

Advantages.—Their superiority results from the nature of the vehicle employed. With oil one can have a

¹ Published by J. B. Baillière & Fils, 19 Rue Hautefeuille, Paris.

² PANAS.—Des collyres huileux ; *Académie de Médecine*, 24 Mai, 1898.

³ SCRINI, B.—Des collyres huileux ; leurs avantages sur les collyres aqueux et les pommades, *Thèse de Paris*, 1898.

collyrium perfectly aseptic and stable for several months without a sign of alteration, while in aqueous collyria micro-organisms soon develop and make their employment dangerous.

Oil in fact is a very poor culture medium for microbes, and these collyria—exposed for months to the air and light in open flasks which allowed dust to accumulate in quantity—remained transparent and unaltered.

Another advantage is the avoidance of spasm of the orbicularis, which is never absent when water collyria are used. Thus we need have no more fear of instillation causing a sudden contraction of the lids with its attendant accidents.

Finally, the action is much more efficacious and more rapid. One drop of a two per cent. oil solution of cocain, instilled one or two minutes before a cataract operation, suffices to anæsthetize the cornea, while it would be necessary to repeat the instillation two or three times and wait five minutes and more with a five per cent. aqueous solution. This rapidity of action does not seem to be attributable to more rapid absorption of the alkaloid from its oily solution⁴; maybe it is due simply to the absence of lachrymation: the major part of an aqueous collyrium is washed away by the tears it excites. However that may be this efficacy is certain, and in several rebellious cases of iritis we have been able to break up synechiæ which had resisted atropin in aqueous solution. Eserin also shows itself much more energetic in oily solution. M. Scrinì reports such an observation in his thesis and we have observed a case of the same kind:

Mme. X., aged forty-five years, enters ward Saint Agnes for chronic irritative glaucoma, in the service of Professor Panas.

Examination, October 10, 1898.—O. S. hard; intense peri-orbital pains; glaucomatous cataract, V. = 0. O. D. Appearance normal; tension slightly +; some slight pains on this side; colored rings around the flame; fundus normal; no excavation of the optic nerve; field a little contracted; V. = 2/3.

⁴ MERMET.—Étude expérimentale sur l'absorption et la diffusion cornéennes, *Thèse de Paris*, 1897.

Treatment.—Anti-glaucomatous iridectomy in the left eye, which stops the pains, and in the right instillations of aqueous solution of pilocarpin.

One day, by mistake a drop of atropin in aqueous solution was instilled into the right eye; this was promptly followed by mydriasis, increased tension, lively pains, pericorneal injection, arterial pulse at the papilla visible with the ophthalmoscope—in fact, all the symptoms of an attack of glaucoma. Instillations of aqueous collyria of eserine and of pilocarpin, repeated four times a day for forty-eight hours, were of no effect. The patient constantly suffering much and the mydriasis persisting, one drop of a one per cent. solution of eserine in oil was instilled ten hours after the last application of the watery collyrium; two and a half hours later the pupil was strongly contracted, the tension had lessened, the pains completely disappeared, and the patient felt much better. This state has been maintained ever since and, thanks to daily instillations of eserine, has not been interrupted by a relapse.

Inconveniences.—The sole inconvenience of oil collyria is the consequent irritation that they may provoke if the oil is of bad quality, or has been badly prepared and incompletely freed from the oleic acid that it contains.

This may be avoided by taking certain precautions; local anæsthesia is always obtained with cocaine in oil solution at the clinic of the Hôtel Dieu—and we have never observed the least irritation, even in cataract operations.

Preparation of the Collyrium.—The vehicle employed should be either olive or peanut oil; these two substances having the advantage of not being irritating and possessing the property of dissolving the basic alkaloids.

It is very important that the oil be well prepared, not only aseptic, but perfectly freed from the oleic acid it contains, for the mere presence of this acid would be enough to make its use painful. At the Hôtel Dieu, following Delacour's method⁵, 100cc. of olive oil are mixed for forty-eight hours with an equal volume of 95° alcohol;

⁵ DELACOUR, J.—Oil Injections of Biniodide, *Rev. Gén. de Clin. et de Therap.*, 7 Juin, 1893.

being careful to agitate the mixture from time to time to make their contact more intimate. The alcohol is then decanted, which carries away with it the oleic acid which had been in the oil. The latter is exposed in a porcelain capsule to a temperature of 120° C. for ten minutes, thus eliminating the last traces of alcohol. When it has cooled to about 70° C. two centigrams of cocain are added little by little, stirring with a glass rod. The solution is then filtered through sterile cotton into a sterile flask.

The basic alkaloid is used, the salts not being sufficiently soluble; even the salts of the fatty acids—the stearates, oleates, margarates—dissolve poorly in oil. The employment of the basic alkaloid enables us to obtain perfectly standardized solutions, since it is the base that is utilized instead of the salt, as in the aqueous collyria.

Cocain, atropin, and eserin are perfectly soluble. Cocain cannot be dissolved above two per cent., but this is very satisfactory, this collyrium acts more rapidly and more effectively than one of 5 per cent. in water.

Eserin, atropin, and pilocarpin are used in the same percentage as in water, *i. e.*, 1 per cent. The oil solution of eserin, when properly prepared, has the advantage of not oxidizing from the air and of not turning to rubreserin—an oxidation which occurs very rapidly with water collyria and alters their quality.⁶

Objection may be made that the cost of these oil collyria is a little higher, but because of their perfect stability and absolute purity they do not have to be renewed as would the aqueous collyria.

Employment.—Dropping bottles that allow dust to collect on the upper part or lip may not be used, because the liquid might be contaminated when it is dropped from them. To avoid this M. Panas has had constructed a small large-mouthed bottle covered with a cap ground to fit, like the

⁶ To prevent this oxidation dissolve the eserin first in a sufficient quantity of perfectly pure ether and mix immediately with the oil; this is kept at 45° C. over a water bath until the last trace of ether has been dispelled; the solution thus prepared is clear, transparent, and will not show the least change of color even after a year (SCRINI, *loc. cit.*).

Canada balsam bottles used in histology, containing a little glass rod with spatula end.

When instilling, let fall into the conjunctival *cul-de-sac* the little drop of oil hanging from the spatula. If the rod has touched the eye lashes or lids it is passed through a flame before being replaced in the bottle and the purity of the collyrium is assured.

The inconvenience of this rod is the difficulty of using it, the drop of oil usually falling too soon. This may be remedied by replacing the rod with a little tube tapered at one end, the finger upon the other end controls the drop. The little bulb dropper of Morax must not be used, for the oil collects at its end and becomes dusty. M. Panas to-day uses a bulb somewhat like that of Morax, but in which the lower tubulure, convex and recurved like an italic S, is brought closer to the neck of the bulb, facilitating the flow of the liquid.

Indications.—Oil collyria can be used in all cases where water collyria are indicated: external affections of the eye, ocular surgery or ophthalmoscopic examination.

External Affections of the Eye.—In addition to its greater efficacy and rapidity of action, cocain in oily solution has the very important property that it does not alter the corneal epithelium as the aqueous solution does. This property will extend its employment to corneal ulcers with blepharospasm and to catarrhal conjunctivitis with intense pains without fear of retarding cicatrization or of corneal infection through loss of its epithelium. For the same reason cocain in oil will be used by preference in the extraction from the cornea of foreign bodies which are so often complicated by corneal ulcer.

Ocular Surgery.—In operations upon the globe the instillation of 2 per cent. oily solution of cocain acts more quickly than its 5 per cent. aqueous solution. The only precaution to be taken is to thoroughly wash the conjunctival *cul-de-sac* and the surface of the cornea after the instillation, which is then not to be repeated before the operation—for two reasons: first, which applies to all the collyria as a measure

of precaution, the collyrium might not be perfectly aseptic ; second, the oil, not being miscible with the tears, forms with them a very fine emulsion which spreads over the cornea and embarrasses the operator by the brilliant reflections which it causes. As a help in obviating this little inconvenience the oil may be employed in every corneal operation, and in all the patients operated in the Hôtel Dieu clinic we have never observed the least consecutive irritation. We note that, maybe, the oil collyrium favors cicatrization in cataract operations ; this takes place more rapidly in patients who did not have watery cocain than in the others ; no doubt the delay is due to the desquamation of the corneal epithelium which an aqueous solution of cocain always provokes.

Ophthalmoscopic Examination.—Finally, these collyria may be used for ophthalmoscopic examination. Their more rapid action is here counterbalanced by the inconvenience just alluded to: the emulsion formed by the admixture of oil and tears prevents examination of the fundus ; it is necessary to wait, before this can be accomplished, until the cornea shall have been sufficiently cleared by the tears, which may take ten minutes.

Nevertheless the oil still will have the superiority in that it acts much more effectively ; then, with the watery collyrium we sometimes have to wait long for mydriasis, to say nothing of the epithelial desquamation which hinders the examination as much and which cannot be obviated.

To resume: oil collyria show themselves superior to aqueous collyria. M. Scrini has recently succeeded in dissolving duboisin, hyoscyamin, homatropin, daturin and scopolamin.⁷ These attempts deserve following up. It will be interesting to make the employment of these collyria general and to extend it to the antiseptics so as to do away with most of the pomades—iodoform, etc.—employed in ocular therapeutics, whose purity is never absolute.

1136 Dean Street, Brooklyn, N. Y.

⁷ SCRINI.—Les collyres huileux, *Arch. d'Ophtal.*, Janvier, 1899.

ADRENALIN IN NASAL OPERATIONS.

FRANK B. SEITZ, M. D.,

Buffalo, N. Y.

WHILE at our State society meeting in Albany Dr. Jokishi Takamini gave me a sample of adrenalin, the active principle of suprarenal capsule. The old preparation, of desiccated powder, is a great help in making ocular and nasal operations bloodless, but, being an animal product, it rapidly becomes foul, and there is constant danger of its producing sepsis.

Adrenalin, being free from animal tissue, promises to be without this dangerous and unpleasant quality. Following is a report of several nasal operations in which adrenalin was used locally.

Miss P., aged twenty, required removal of part of the right middle turbinate. I applied a pledget of cotton saturated with 4 per cent. cocain to the place for ten minutes, then another pledget saturated with adrenalin 1-1000 to the same spot for ten minutes. Upon the removal of the latter the parts did not look blanched as after suprarenal extract, but were dark red like an angry inflammation. Two pieces were removed with a Hyjak punch. There was no bleeding; the cut edges looked blanched, bloodless, the field of operation being clearly visible after the cutting. The wound was packed with iodoform gauze.

In two days the patient reported that she had removed the packing the next morning, this being followed by considerable bleeding which persisted all day. The mucous membrane around the cut edges now presented a white coating, as after the cautery.

Two days later a slough came off, showing that some destruc-

tion of tissue had taken place. The case went on to complete healing.

Mrs. B., aged thirty, required the lower border of the left inferior turbinate removed; cocain and adrenalin were applied as above. Six punches were taken out, followed by snaring off the posterior end; during all this cutting my view was never obstructed by blood. In six days a slough came off of the surrounding mucous membrane, as after an application of the cautery.

Now I began to think that too much adrenalin had been used. It had expelled so much blood and kept it out so long that death of the tissue took place from anæmia, so I decided in my next cases to use less, but did not use it on a saw operation for fear of sloughing.

Mrs. M., aged forty-five, required a piece taken from the right middle turbinate. I alternately swabbed with 8 per cent. cocain and adrenalin; then punched out two pieces. There was no bleeding; interior of the nose was clearly visible after the cutting.

Robert R., aged twenty-seven, had four pieces punched from the lower border of his right inferior turbinate without pain or bleeding, and left my office without a drop of blood appearing at the nostrils. Preparation was as above, alternately swabbing with 8 per cent. cocain and adrenalin.

Miss L., aged thirty-five. After alternately swabbing with 8 per cent. cocain and adrenalin I took out two pieces from the lower anterior end of her right middle turbinate; my view of the cutting was unobstructed by blood. She reported in a few days: no bleeding until evening, when there was considerable for a few hours; then it stopped and went on to healing, with no sloughing of the tissue.

The conclusions to be derived from this experience would seem to be that adrenalin is an efficient prehæmostat in nasal operations.

It will keep indefinitely, and, because of its crystalline form, solutions of different strengths can be made with mathematical certainty.

If used too strong or too long (*i. e.*, ten minutes), it will produce sloughing through ischæmia.

SARCOMA OF THE CHOROID: TWO CASES.

D. A. MACLACHLAN, M. D.,

Professor of Ophthalmology and Otology, Detroit Homœopathic College.

TO ophthalmic surgeons, especially, the question of malignant growths in the eye is one of very great moment: 1. Because of their nearness to the brain. 2. Because the blood and lymph canals are so arranged as to convey the disease germs or cells directly and quickly to vital structures. 3. Because the limit of operative procedures is so soon reached. 4. Because, for the above reasons, the disease is so liable to return and is so surely and rapidly fatal when it does.

These points are well exemplified in the disease which is made the subject of this article. The growth originates in the larger blood vessels of the choroid, the vascular layer of the eye; this would mean from the short and long posterior ciliary arteries in the middle layer of the choroid, or the choroid proper. The various lymph spaces and canals also become involved, soon or late.

The aqueous and vitreous, which are simply modified lymph, and the perivascular lymph spaces of the retina connect directly with the lymph spaces of the optic nerve, and these again with the pial and subarachnoid spaces continuous with those of the brain. The lymph spaces of the choroid join the perichoroidal spaces which communicate with the Tenonian cavity by lymphatics which accompany the ciliary arteries and veins that pierce the sclerotic, and the Tenonian cavity communicates again with the large lymph cavity surrounding the optic nerve, whence

the lymph is carried away through the ordinary lymphatics of the orbit. With such intimate relations existing between the various parts of the eye, having direct communication with each other and with the brain, it would seem almost impossible to diagnose and remove these malignant growths before extension to surrounding structures has taken place. As a matter of fact, it is difficult in most cases; so that very many times the disease returns, more or less promptly, and a fatal result ensues.

Melanotic sarcoma, the pigmented variety, is the only form coming under the observation of most of us, leucosarcoma being comparatively rare. There are points of difference between them, however, that should not be overlooked—the latter develops in the anterior portion of the uveal tract, and at a much earlier age than the pigmented form; making it liable, therefore, to be confounded with glioma of the retina.

Another point of interest attaches to it in the character of the cells composing the neoplasm. They are either round or spindle-shaped, the former being much the more malignant of the two, and almost certain to return, proving fatal by development about the original site of the growth or by metastasis to distant organs, notably the liver. Death follows by exhaustion or the overwhelming of some vital organ.

Other forms are so rare that it may almost be said that intraocular tumors are limited to two, viz., sarcoma of the choroid and glioma of the retina; the latter being generally regarded as equivalent to, if not identical with, round-celled sarcoma.

There should not be much difficulty in differentiating these two, since the former rarely occurs before forty, and the latter is essentially a disease of childhood. The conditions with which sarcoma of the choroid is likely to be confused are simple detachment of the retina and glaucoma. From the former of these it may be known in the early stage by the reddish-yellow color, the appearance of vessels beneath the retina, and absence of wavy motion of

the retina; moreover, simple detachment generally occurs in a myopic eye, or following a blow, and tension is diminished. Primary glaucoma differs from sarcoma of the second stage in not having visual defects before inflammatory symptoms have set in, in the usual premonitory symptoms, in the remissions of pain, and in being bilateral usually.

The following clinical case is illustrative of the first and second stages of the disease:

Mrs. G., aged forty-five, American, married. Father died at seventy-four, mother at eighty-seven years. Has one brother and three sisters. One sister had a mammary tumor removed when thirty-eight years of age; was then thought to have pulmonary tuberculosis, but symptoms disappeared after the operation on the breast.

Mrs. G. had always been vigorous and well, except for occasional menstrual or nervous headaches. July 15, 1899, she noticed that vision in the upper half of the visual field was lost. An oculist was consulted, who diagnosed simple detachment of the retina, and advised rest in bed. Another oculist concurred in the diagnosis, but thought the detachment and visual defect had come on gradually, though recognized suddenly. Patient remained in bed four weeks. I was consulted by letter at the time as to the treatment by rest in bed, and took occasion to point out the importance of a correct diagnosis and possible need for operative measures, but heard nothing further at the time. The scotoma gradually increased, until, in October following, only the extreme outer part of the field remained. By February, 1900, the eye had become stone-blind, and the detachment complete. The condition continued without further symptoms until May 13, 1900, when pain in the eye came on, growing worse during the night, and lessening gradually until relieved at noon next day; returning in the evening following, and keeping up this daily course, but not becoming severe.

An oculist was consulted, and, according to the patient, thought it "suspicious of sarcoma of the choroid," but advised her to "return home, and, if the trouble increased, to come back for operation," adding that "he would guarantee that it would not return after removal."

Patient called upon me next day. The eye was then somewhat injected, the pupil slightly dilated, and tension slightly plus. Pain moderate, but patient was evidently worried and nervous. A diagnosis of sarcoma was given, and immediate removal advised. She agreed to enter the hospital and have the operation done next morning. During the night, however, the pain in the eye became excruciating, so that even strong anodynes failed to give relief. I was not called during the night, but was told of the "terrible experience" in the morning, and asked to anticipate the hour set for the operation, as the patient could no longer endure the suffering. I found the condition greatly changed on seeing the patient. The eye was bloodshot and deeply injected, the conjunctiva and lids enormously swollen, the cornea hazy, the eye staring and stony hard, and the patient bore evidence of having suffered most intensely, as she was still doing.

Under anæsthesia the eye was removed, together with most of the orbital tissue, the optic nerve being divided as far back as possible. The orbit was packed with bichloride gauze, which was removed partially on the second, and entirely on the third day after the operation. Under the usual surgical treatment the patient made a prompt and good recovery. In about four weeks an artificial eye was adjusted and worn nicely, notwithstanding the very thorough removal of the orbital tissues, and the patient allowed to return home.

On section of the eye a rounded black tumor, about the size of a chestnut, was found in the lower and outer part of the globe, having grown from the choroid. The retina was completely detached, looking like a dark cord, stretching from the posterior to the anterior pole of the eye. The tumor was dense and hard in structure, and, together with the structures removed, was sent to Professor F. V. Horne, director of the pathological laboratory of the Detroit Homœopathic College, for examination. His report announced it to be a "typical specimen of round-celled sarcoma," involving the vessels and tissues of the choroid and the other coats of the eye deeply, at the site of the growth, which confirmed the diagnosis and the necessity for early and complete removal of the eye.

He discovered no trace of the disease, however, in the tissues from outside the globe, which affords reason to hope that the

patient may escape a return of the disease. A letter just received from her, a few days since, says she is quite well in every way, with no apparent signs of a return of the disease. She has continued to take calc. fluor., and arsen. iod., internally, and is hopeful for the future.

The only other case I recall having seen in my practice came to me in the spring of '92 as I was about to start for Europe.

The subject was a millwright, about fifty-five years of age. The disease was still in the first stage, attention having been called to it by the dilated pupil and disturbed vision. He had already consulted two specialists, one several months before and the other recently. The former determined nothing, and the latter had fitted glasses, but had failed to discover the growth and retinal detachment, which was located in the inner and lower quadrant of the left eye, just back of the ciliary body, so as to easily escape notice. The age of the patient, the character of the visual defect and retinal detachment, the increased tension, and the steady development of the condition left no doubt as to the diagnosis.

I advised enucleation, but he said he would wait till I returned. I did not get track of him again on my return after several months, so do not know the outcome. I have since wondered, however, whether, on account of its location so far forward in the uveal tract, it did not prove to be *leuco-sarcoma*.

The prognosis of sarcoma of the choroid is always very grave, and, if left to itself, it is regarded as invariably fatal. The patient would not live more than five years, and in most instances considerably less. The results are bad enough when an operation has been done. Of 285 cases operated on by Fuchs, 31, or thirteen per cent., were followed by local recurrence of the growth. Most of these recurrences took place within a year, and statistics show what is of great practical importance—that if recurrence does not take place within four years after removal it is not likely ever to reappear.

The time of operation is of the utmost importance. If operated on in the *first* stage it is very likely to not return ;

if in the *second*, about five per cent. recur; if in the *third*, about thirty per cent. return; in the *fourth* stage, death is practically certain to be not far off.

A curious and important fact seems to have been demonstrated, viz., that while removal in the first stage is likely to prevent local recurrence, metastasis is just about as likely to take place as when done in the third stage. At all events, removal appears to be the only form of treatment available. It cannot be done too early, and it seems to me the patient should be given the benefit of the doubt in all cases. In the first stage, enucleation alone seems sufficient; in the second probably, and in the third certainly, thorough removal of all the tissues of the orbit is indicated.



SYMPOSIUM.

Operating for Postnasal Adenoids.

LOUIS J. LAUTENBACH: We must rely almost exclusively on the sense of touch for examination. I no longer employ an anæsthetic, except at the special request of the family physician, as the number of deaths from anæsthesia in these cases has been so considerable that I do not feel I can bear the responsibility; the condition not being serious enough to take such risks, and the operation is not sufficiently painful to justify it. I apply the same rule to adults as to children. I do not pretend to know why operations in this region seem to predispose to fatal results from anæsthesia, but it is a truth.

I have not seen a case in which I have not been able to reach every part of the post-pharyngeal space with my (short) index finger, or an adenoid not entirely removable by my finger-nail if the latter was in good condition.

I use an artificial finger-nail as a substitute when my finger is sensitive or painful, or the nail has been broken or damaged, or the nail is too short or irregular. It is readily slipped over the terminal and middle phalanges of the index finger, to which it firmly attaches itself by spring rings, the cutting edge being supported in position by the finger-nail fitting into a recess on the inner side of the knife; it is jointed in structure so that the motion of the phalanges is not limited. The purpose of carrying it over to the middle phalanx is to give it added support and firmness and prevent the possibility of its slipping off while the finger is in the upper pharyngeal space. The very fact of there being a large number of instruments for this purpose would indicate that their work is not perfect. I have discarded all curettes and forceps.

Two days later I examine the region, and if everything is

well I re-examine after a further period of three or four days, when, if healing has been perfect, the upper pharynx will feel smooth and soft, and there will be no danger of recurrence. To my knowledge I have had but one case recur; when I operated I was at a disadvantage in having my finger-nail short and badly curved, my steel finger-nail being at the instrument maker's. A few weeks later I operated again, and this time without recurrence.

In operations by the ordinary methods the finger examination must invariably be made to verify the diagnosis, and this examination is almost as severe and disagreeable as my operation. Then the child must be anæsthetized and subjected to a long operation, which is far more apt to do damage to healthy parts in that region, because there is no feeling touch at the cutting end of the instrument. Then when the operation is supposed to be done, the finger must be used to see whether all the diseased parts have been removed, and the shreds or larger masses remaining must be removed by scraping with the finger or some steel instrument. If with the latter, then another digital examination must be made at once, and then if all is well the child is allowed to come to, and if he recovers from the anæsthetic, he will have a horror of the doctor as well as the doctor's finger being poked into his throat, and the chances are the doctor will presume this case is well and make no further digital examinations, while the condition may recur. I have had quite a number of cases come to me with just such histories, in which recurrence has been the sequel and in whom I have been successful by my method.

LEIGH Y. BAKER: In "Treatment of Naso-pharyngeal Adenoids," Dr. Louis J. Lautenbach is, I believe, correct in part. I have never seen a curette, or even an artificial finger-nail, which will do the work of removal as neatly and fully as the natural nail, nor is there reason for being without this natural instrument in good condition. If one finger is not in good order the other can be relied upon; nor is it necessary to be *ambi dextrous* to insure good work. There are no instruments about to frighten the child, which naturally shrinks from the use of any unfamiliar objects, nor is the pain sufficient, in most cases, to warrant any mention of it before introducing the finger.

The removal of diseased growths in this way is little or no more trouble than the ordinary digital examination, either to the physician or patient.

ISAAC C. SOULÉ: I cannot agree with the author in any of his conclusions, excepting that with reference to the use of chloroform, which, in lymphatic diatheses such as these patients present, seems particularly liable to fatal accidents.

Under twelve years of age, as a rule, a general anæsthetic is advisable, both to obviate the nervous strain and shock as much as possible, but also to avoid the subsequent fear the child will have for anyone known as a doctor, if the operation is done without it. The nasal and postnasal cavities should be sprayed with a 2 to 5 per cent. solution of cocain, followed in about five minutes by a spray of a fresh solution of suprarenal extract; then the anæsthetic administered, which should be ether.

Over twelve years old, a local anæsthetic, applied with an applicator and cotton (using quite a little force in rubbing it on the parts), and followed with suprarenal extract, is sufficient. If plenty of time (fifteen to twenty-five minutes) be occupied in anæsthetizing the parts, the procedure is painless. Diagnosis can almost invariably be made without use of the finger; and a *clean, sharp* steel instrument is infinitely better, certainly, than a questionably clean, fragile finger-nail. Only a small per cent. of adenoids are soft enough to be thoroughly removed with the nail, and the large majority of those can be removed with remedies.

Those giving most trouble are hyperplastic, and entirely too dense to be removed by other than a *good* cutting instrument. Recurrence is exceptionally rare if the diathesis be treated remedially, following the operation, as it should be in all cases. Whenever surgical interference is necessary in any case, it should be done with as little inconvenience and pain to the patient as is compatible with a thorough removal of the growth.

It should also be accomplished with as little injury to the surrounding healthy tissue, and in as short a space of time, as possible.

These indications are certainly more fully met by the use of say Tattstine's curette, than the finger-nail.

D. A. MACLACHLAN: I incline more and more, as years go by, to the practice advocated by Dr. Lautenbach. I have not

yet reached a point where I feel free from anxiety in administering an anæsthetic to such cases; particularly where I cannot rely absolutely upon the person giving it. In small children the finger-nail, properly prepared, is quite sufficient in the way of an instrument, and it certainly facilitates the performance and lessens the seriousness of the operation very greatly. I have thought, too, that many times unnecessary injury is done to the naso-pharyngeal structures by the various cutting instruments in the hands of inexperienced or incautious surgeons. To say the least, Dr. Lautenbach's suggestions and methods are timely; for I believe it desirable to urge conservatism in the removal of adenoids, especially in homœopathic practice.

T. M. STEWART: The adenoid operation without an anæsthetic is not always practicable, and often the double operation—viz., tonsilotomy and adenectomy—must be done at one sitting. These cases occur most often in children. Many such children are of the lymphatic diathesis, and their hearts are already weak; hence the heart depression of chloroform and excitement make death more liable. When an anæsthetic is needed in this class of cases, ether is preferable; preceded by cocain to nostrils and $\frac{1}{300}$ grain of atropin, as recommended by Hulstead of Syracuse, to limit secretions and the usual uncomfortable after-effects of ether anæsthesia.

CHARLES E. TEETS: Most certainly I am very much opposed to the removal of adenoids with the finger nail, and in my large experience, which has extended over a period of fifteen years, I have not found it necessary at any time to substitute the finger nail for the properly constructed instrument.

JOHN O. McREYNOLDS: I would say, from an experience of many hundreds of cases in private practice, that the operation can be very successfully performed with or without anæsthetics, and in many instances without any instrument but the finger. Generally, however, I have found the curette useful, and even necessary when there is much fibrous tissue present in the growths. In my own practice I make the operation by preference without any anæsthetic at all, but often yield to the desire of my patients and employ a general anæsthetic, although I have not been able to discover any difference in the results by the two

methods. I always have some solicitude about a patient under a general anæsthetic for an adenoid operation, although I have not seen a fatal case in this affection.

ALLEN T. HAIGHT: If the patient is a very young child it is sometimes necessary to employ the index finger as a means of location of the adenoid. Otherwise, the precise location can be located with the small laryngoscopic mirror. The diagnosis of the presence of adenoids may be absolutely made by such symptoms as persistent mouth-breathing, nasal talking, restless sleeping, together with a peculiar drowsy appearance of the face. Except in very young infants and children over twelve years of age I invariably use an anæsthetic, namely, the bromide of ethyl. I have operated upon over eight hundred cases by this method of anæsthesia, and in the large majority of cases both tonsils and naso-pharyngeal adenoids have been removed. I have yet to experience a fatality, or even any serious symptoms, from the effect of the anæsthetic. I use this anæsthetic to produce primary anæsthesia, and my technique is as follows: The contents of a vial of the bromide of ethyl are emptied upon cotton placed in an ordinary ether cone; the patient sits upon the lap of a nurse or an assistant, while the second assistant stands behind the patient and holds *in situ* the mouthgag, which is inserted before the anæsthetic is applied. The reason for inserting the mouthgag before giving the anæsthetic is this: Bromide of ethyl as a primary anæsthetic does not paralyze the involuntary muscles, and as soon as the child is under the influence of the anæsthetic the jaws become firmly set; consequently it is impossible to introduce the mouthgag unless the anæsthetic is pressed to the point of danger. Another advantage of this anæsthetic is its quickness of action; the length of time occupied from the beginning of the anæsthetic until both tonsils and adenoids are removed and the child again conscious, occupying not more than three minutes. The patient at once coughs or spits out any hæmorrhage which may strike the epiglottis; consequently, the danger of strangulation is eliminated by this anæsthetic, which is ever present when chloroform or ether is used.

I use different sizes and forms of Gottstein's curette for removing the adenoids, which instrument is far more satisfactory to

me than the finger nail. The sense of touch must be employed to determine the completeness of the operation.

SOCIETIES.

Abstracts, with discussions, of the more interesting papers presented at recent meetings.

NEW YORK STATE HOMŒOPATHIC MEDICAL SOCIETY ;
ALBANY, FEBRUARY 12, 13, 1901.

When Should the Oculist be Consulted? by Fred. D. Lewis.

The author believes that many of the conditions perplexing the physician might be made much easier if the deleterious effects of eye-strain were removed. Nerve force should be minimized by eradicating the eye-strain, because this strain continues throughout the working hours, not for days, but for years; even affecting the fundamental nutritive system and the physical growth of the human being. Therefore it is judicious, before a child commence his school career, to have his eyes examined and any defect corrected. Also, before commencing treatment of a chronic disease, would it not be beneficial to eradicate any such possible factor?

Why Are We Deaf? by J. F. Roe.

After giving the several different causes of deafness the author calls attention to the fact "that twenty per cent. of all purulent affections of the ear are directly attributed to scarlet fever. What great care and responsibility must then rest with the practitioner who treats these cases. Not less so with the grip, since here even a larger percentage is furnished on account of its more general invasion and repeated epidemics." Following scarlatina the physician takes great pains to obviate nephritic complications; why is it not as necessary to keep on the lookout for ear complications? The kidney disease kills, while the aural sequela is a life punishment. The general practitioner should either acquaint himself with the early appearances of middle-ear disease and examine therefor after every scarlatinal case, or have someone else, conversant with such conditions, do so. Simi-

lar care should be exercised after other exanthemata—the grip, etc.

TORONTO CLINICAL SOCIETY, JANUARY 2, 1901.

Exophthalmic Goiter.

W. B. THISTLE reviewed the causes of this disease and reported two cases. A tall, thin married woman, thirty-four years old, for some time had slight enlargement of the neck, which had recently increased. Temperature was slightly elevated; pulse in the neighborhood of 120; prominent eyeballs. For some time had noticed palpitation, and had experienced fear and a sense of nervousness with weakness. The gland was punctured, and a dark-brown fluid drawn off. A solution of perchloride of iron was injected. Recovery was complete. The second case gave a history of having had Graves' disease some six years ago. Recovery was complete at that time. When admitted to the hospital this time, the patient showed every symptom of the disease. He had lost forty pounds. Temperature elevated slightly. Pulse varied from 130 to 160; no murmurs. Had several attacks of syncope; also troubled with attacks of diarrhea. The treatment was rest in bed, with iodide of potash and belladonna. There was very little general improvement. The tumor which was present in this case was operated on by Dr. Peters, who removed it, as well as a portion of the gland. The patient is now quite well.

Foreign Body in the Eye Skiagraphed.

DR. G. STIRLING RYERSON reported this case, and exhibited the skiagraph. It was supposed that a portion of a chisel broke off and struck the man's eye . . . The injury of the eye was not visible through the ophthalmoscope. The skiagraph was entirely successful, and showed where the body was, and also showed its comparative size and shape to some degree. Immediately after the skiagraph was taken the eye was removed, and it was found that a large portion of steel was firmly imbedded in the eye, and lying somewhat to the inner side of the optic nerve.—*Can. Practitioner, February, 1901.*

BUFFALO ACADEMY OF MEDICINE : SECTION ON OPHTHAL, OTOL.,
RHINOL., AND LARYNGOL., DECEMBER 17, 1900.

Ætiology and Treatment of Concomitant Strabismus.

A. A. HUBBELL considers this squint primarily and essentially a neuropathic condition, not muscular. The rotation of squinting eyes in which secondary changes have not taken place is of full normal extent. The so-called functional or optical treatment will be successful in the majority of cases, if it can be commenced early enough. In convergent strabismus which begins at one and a half to three and a half years of age, glasses would restore parallelism, if worn constantly as soon as child would be old enough to do so without accident. After squint has existed permanently for three to five years, the spectacle treatment will be successful only in a small portion of cases. After glasses have been tried several months or a year without success, a properly selected operation may then be resorted to.

Discussion.

LUCIEN HOWE said he could see no reason for prescribing convex glasses for children who are hardly more than infants. A glass itself is a dangerous neighbor to the eye under such circumstances, and it is possible to obtain relaxation of the ciliary muscle more completely by weak solutions of belladonna. It is well established that this can be used constantly for months or even years without any evil effects [?], and in these young children he has frequently observed a convergent strabismus disappear when only occasional applications were made. Indeed, it is a question if this would not occur in a considerable percentage, without any treatment whatever. In all cases, however, the children would be taught a few letters at as early an age as possible, in order that the vision of each eye might be accurately tested, and if this begins to decrease, then, and not until then, more active treatment or operation is advisable.

Influence of the Vertical Muscles in the Production of Asthenopia.

A. G. BENNETT holds that a prism or tenotomy of either of the lateral muscles seldom is of much avail in correcting a horizontal deviation. Prisms act only as a crutch to a weak muscle, which by lack of use becomes weaker still, or, if operation be

done, sooner or later the old trouble is back with all its virulence. He believes that 6° of esophoria is uncommon and then is accompanied by a hyperopia which, when corrected, almost invariably corrects the esophoria. If, however, this does not occur and symptoms of eye-strain are not relieved, look elsewhere for the trouble ; and the most likely place to find it is in the superior or inferior rectus. The slightest vertical deviation may be the key to the whole problem. "Latent esophoria or exophoria I do not believe in, but latent hyperphoria I know exists ; it can be demonstrated." If the full amount of hyperphoria be corrected, preferably by tenotomy, no further trouble will be experienced from the esophoria. In many cases of exophoria the patient has been satisfied upon my correcting the hyperphoria alone, though the exophoria was as much as ever in evidence.

The correction of hyperphoria is not a simple matter. Is the hyperphoric eye in correct position, or is it too high, or is the other eye too low ? A question that is not always easily solved. Or, again, are both eyes too high or too low ? Here comes in the exceeding value of the tropometer, an instrument without which no ophthalmologist can keep house. It is a grievous mistake to cut a left superior rectus when the right eye is low, and a prism, base down, before the left, will not give your patient comfort when he needs a prism, base up, before the right ; but the phorometer and Maddox rod will not give you the slightest inkling as to which muscle is at fault. The tropometer, too, is of great service in that class of cases which, when perfectly refracted and showing orthophoria, still manifest symptoms of eye-strain. Some of the happiest results I ever had have occurred in just this class of patients. The tropometer revealed anaphoria, and a tenotomy of both superior recti has proved the diagnosis correct by almost immediate relief from suffering. Valuable as the tropometer is, it is sometimes difficult to determine in cases of hyperphoria which is the muscle at fault. The markings on the instrument are 10° apart, and in cases in which the error is not large the movements of the eye, both up and down, may appear normal. In such cases I am in the habit of ordering a temporary prism, base down, before the hyperphoric eye ; and in most cases this proves the correct treatment and a permanent prism or tenotomy of the offending superior rectus is performed. I have had some cases in which the prism in this position has

not proved satisfactory, and reversing the lens and putting it before the other eye has brought about the desired relief. Particularly true is this in elderly people ; and my experience is that, although in the vast majority of vertical tensions the error will be either that of hyperphoria or anaphoria, most of the minority will be found to be patients over fifty years of age.

There are cases of strabismus, either convergent or divergent, in which the relief of the vertical tension will do more for the cure of strabismus than a tenotomy of the internal or external rectus ; and no case should be operated on until the upward and downward rotation has been thoroughly investigated.

Discussion.

LUCIEN HOWE: It is not possible to speak of accurately lowering one eye a certain number of degrees and elevating another a corresponding distance. We can only approximate a tropometer measurement by taking the average of a considerable number of observations. At no one time can we say that the eye turns up six degrees or any other definite distance.—*Buf. Med. Jour.*, February, 1901.

ABSTRACTS FROM CURRENT LITERATURE.

Syphilitic Manifestations in the Optic Nerve and Retina.—Paul Turner Vaughan, *N. Y. Med. Jour.*, October, 1900.

These are not rare. During the past twelve months the writer has had thirty-one cases in his private practice (31 per cent.). Simple hyperæmia is not affected by antisyphilitic treatment, and has very little, if any, effect upon vision. Dr. Vaughan's cases were : 1 of primary optic neuritis ; 1 retrobulbar neuritis ; 2 papillitis ; 3 neuro-retinitis ; 3 retinitis ; 2 chorio-retinitis ; 3 neuritic atrophy ; 5 genuine atrophy, and 11 of tabetic atrophy (in every one of which there was syphilis). He agrees with Horstmann, Alexander, Oppenheim, Rumpf, Swanzy, and Juler, that there is a primary specific optic neuritis ; he has had

several cases during the past few years which could be explained in no other manner. This primary specific optic neuritis can be distinguished from true papillitis by the greater prominence of the papilla (at least $\frac{2}{3}$ mm. or 2. D.), the distended veins, lessened caliber of the arteries, and the marked infiltration of the optic-nerve substance—all of which should occur in true papillitis. Neither the variety nor location of a tumor appears to be of significance in producing papillitis. According to Schmidt-Rimpler the latter occurs comparatively early, and is most pronounced with growths in the cerebellum or posterior portion of the cranium. Our author believes the optic nerve and retina can become involved in syphilis in one of three ways: (1) direct action of the specific poison upon the nerve fibers themselves; (2) from a syphilitic intracranial growth or inflammation by pressure or extension; (3) from diseased conditions of the blood vessels. One case of neuro-retinitis appeared fourteen years after infection. Only recently has any positive light been thrown upon the question whether syphilitic retinitis can occur without involvement of the choroid. Bach had autopsy and microscopical examination of a case of retinitis which furnished for the first time a certain anatomical foundation for the clinical picture of retinitis syphilitica, and gave evidence that retinitis syphilitica, as described by Jacobson, is a complete independent disease of the brain layer and of the retinal vascular system, and is not a secondary affection in consequence of a choroiditis. J. L. M.

Syphilis of the Eye.—Wm. H. Wilder, *Ill. Med. Jour.*, January, 1901.

The eye (except the lens) is the most frequent site of initial lesion, next to the genitalia, fingers, and lips. In the lids the hard chancre occurs most commonly at the inner canthus. The virus might be conveyed by the dirty practice of some kind friend with mucous patches trying to remove a foreign body with the tongue. Differentiate from epithelioma. In the third stage of syphilis there may be a gummatous infiltration of the tarsus which, if neglected, will result in extensive destruction of tissue and serious deformity. In the early stages there is painless tenseness and redness, more extensive than chalazion, but not distinctly circumscribed, which develops gradually and is accompanied by swelling in front of the ear.

The cornea is comparatively seldom attacked in acquired syphilis, and then usually some time after the ordinary secondary manifestations of the disease have disappeared. Dr. Wilder has seen several such cases unassociated with iritis—deep grayish spots 2 or 3 mm. in diameter, near the periphery in the deeper layers of the cornea; with no tendency to ulceration; with localized ciliary injection and apparent involvement of the adjacent sclera. Syphilis had been acquired, in one case one year and in another three years, previously. In probably 70 per cent. or 80 per cent. of interstitial keratitis the cause is hereditary syphilis. Syphilis causes more than half of all cases of iritis; the inherited form much more frequently than the acquired. In the majority of cases of syphilitic iritis there is nothing to distinguish it from some other plastic iritis; but in from 15 per cent. to 20 per cent. of these one or more small nodules about 2 or 3 mm. in diameter, of a dirty orange color, are noticed on the iris (mostly at the pupillary margin.) Formerly these were supposed to be gummatous, but as iritis is one of the secondary manifestations of syphilis, it is probable that they correspond to the papules and condylomata that are seen on the skin. There is usually a broad, firm adhesion between the iris and the lens at its site, which may require most energetic treatment. This papular form of iritis is almost pathognomonic of syphilis. True gummatous tumors of the iris may occur,—fortunately they are infrequent—involving also the ciliary body and choroid, and by their rapid growth leading to destruction of the eye. Ordinarily, syphilitic iritis develops in the fifth or sixth month of the disease, but cases are recorded where it preceded the eruptions on the skin. In a number of cases of firm adhesions resisting energetic treatment, the writer obtained good results by injecting, beneath the conjunctiva near the cornea, “a few” minims of a 1-1000 solution of bichloride of mercury as proposed by Darier; this seems to soften the exudate so that the mydriatic will loosen the adhesions. Syphilitic choroiditis, posterior or at the equatorial zone, may occur independently or associated with iritis or cyclitis. It ordinarily occurs in the later stages of syphilis, and may progress extensively before discovered. The vitreous humor is apt to be cloudy because of minute, sometimes large, floating bodies; these sometimes account for the dim vision or the floating specks. Flashes of light—dazzling, and maybe disturbed color-sense—

may be attributed to irritation of the retina ; micropsia, or distortion of objects, to infiltration or exudation in the layer of rods and cones when the retina is involved.

In syphilitic retinitis there is sometimes endarteritis of the smaller arteries, often resulting in hæmorrhages, or, from diminution of the lumen, impaired nourishment and cloudiness of the retina. Sight may be lost by shrinking of the vitreous. This condition is frequently bilateral, and usually comes on in the third or fourth year after the primary infection. There may be congestion or inflammation of the optic nerve, which, with the retinitis, is unaccompanied by outward signs. Dr. Wilder has recently seen two cases of syphilitic retinitis which developed one year after the initial lesion. They yielded promptly to active treatment, and the impairment of vision is comparatively slight.

J. L. M.

A Discussion on the Indications for the Intra-Nasal Treatment in Disease of the Ear.—*British Med. Jour.*, September, 1900.

PETER MCBRIDE. Disease of the nose and nasopharynx affects the ear in three ways : (1) by reducing atmospheric pressure in middle ear ; (2) interfering with the circulation of the middle ear ; (3) interfering with lymphatic outflow from the middle ear ; (4) extension of catarrhal process through Eustachian tube by continuity. 1. This is caused by the following : (a) hypertrophy of nasopharyngeal adenoids, obstructing mouth of Eustachian tube ; (b) adenoid tissue on post-extremity of inferior turbinate may press on tube, or by obstructing nares reduce atmospheric pressure in nasopharynx ; (c) other nasal hypertrophies act the same as last mentioned. 2 and 3. It must be remembered that the veins of the ear return the blood, to a considerable extent, by way of the pharynx, and that there is a similar connection as to lymphatics. It is therefore conceivable that interference with the circulation may play an important part in certain cases of deafness from adenoids. In some instances the post-extremities of the inferior turbinate become very much enlarged, and I can conceive that they may lead to deafness by interfering with the Eustachian tubes directly or indirectly. 4. In this manner inflammatory conditions caused by impingement of opposite nasal surfaces—*e. g.*, spur—are carried to the ear.

If the aural disease has not gone on to atrophy, there is great cause to believe relief of the nasal condition will bring about like relief of the deafness, etc.

M. B. BARBER adds to the above two conditions of the nose as that affects the ear—to wit : “ (1) the actual passage of pathogenic organisms, such as those of tubercle, diphtheria, etc., up the Eustachian tube, and (2) interference with the normal action of the tubal muscles, either from paresis or paralysis of the palatal muscles, or general thickening of the mucous membrane of that part. To assist in deciding when operation is indicated on account of the ears, it is convenient to divide the cases of chronic non-purulent middle-ear disease into two classes : (1) “those in which inflation [either by Politzer or catheter] improves the hearing”—in these nasal operation is beneficial. And (2) “those in which repeated inflation has no effect,”—in these latter operative procedure is useless.

A. M. GRANT. To resume : there is a causal association between nasal obstruction and some forms of disease of the middle ear, especially the moist catarrh ; but not the typical sclerotic catarrh. In some cases of nerve deafness good results may follow the improvement in nerve tone produced by the removal of nasal obstruction. In operations in the nose all precautions should be taken which diminish the possibility of the occurrence of suppurative inflammation of the middle ear. In doubtful cases nasal operations should be avoided, unless there are other indications apart from the affection of the middle ear.

P. WATSON WILLIAMS did not believe it was the negative atmospheric pressure (causing congestion around the Eustachian orifice) dependent upon nasal obstruction that was the true factor in middle-ear disease :—it was the effect on the ear of the nasal catarrh consequent upon the nasal obstruction that was the true factor.

RICHARD LAKE believed that almost all cases of chronic dry catarrh were nasal in origin . . . “Short air conduction, immobility of the malleolus, and no improvement after inflation left but little hope of aid from intra-nasal treatment.” In respect to negative atmospheric pressure he agreed with Dr. Williams.

SPICER. Would not promise improvement if aural condition lasted over a year. In recent cases he advised nasal operation.

Replies: Dr. McBride said small amount of adenoid tissue located laterally was more detrimental than a much larger amount located centrally. Dr. Barber did not believe in the negative atmospheric pressure factor. A. P. W.

Relation of Eye-Strain and Pneumogastric Reflexes to Digestive Disorders.—A. L. Benedict, *Medicine*, January, 1901.

It is impossible to amass statistics regarding the kind of ocular defect most frequently coincident with pneumogastric functional disorder. That headache, nausea, etc., may be due purely to uncorrected visual error is certainly true; that dyspeptic symptoms of considerable duration are often relieved by attention to the eyes alone is as certainly not true; that too much stress has been laid on the theory of eye-strain is obvious. The very rarity of perfect eyes is a warning against accepting the theory of eye-strain as an explanation of digestive reflexes. It is a common observation of internists that patients who have suffered from functional or organic disease of the vital organs often mention a keener state of the special senses, including sight, after they have been relieved. There are undoubtedly a few instances in which eye-strain has been the last straw in depressing the general innervation of the digestive organs, which are controlled to so large a degree by the pneumogastric.

If you will allow the use of the term "eye-strain," not in the usual sense of an effort to correct a visual error, but just as we would speak of cardiac strain, or strain of any other normal part by overexertion, he is prepared to admit that eye-strain is a very frequent cause of acute gastric symptoms, such as nausea and vomiting.

True pneumogastric reflexes of nausea, etc., are excited by no sensory impressions other than those of sight and equilibrium. Our conceptions of the cardinal directions of equilibrium are jointly due to stimuli of the sense of sight and of the sense of equilibrium. While the center of equilibration is not definitely located and seems independent of the occipital visual centers,

these two senses are intimately connected in the corpora quadrigemina and corpora geniculata. The anterior corpus quadrigeminum and the lateral corpus geniculatum receive visual fibers, and the other component of each ganglion receives equilibrial fibers. The visual and equilibrial ganglionic masses are intimately connected, and from both fibers pass backward to the cerebellum, which is the co-ordinating, or at least *a* co-ordinating, center; acting under the direction, so to speak, of messages from the ganglia of sight and of equilibrium. Visual stimuli not directly related to changes of direction do not cause nausea. In other words, it is a sensory disturbance along the line of equilibration that causes pneumogastric reflex, manifested by nausea.

Why should nausea result from disturbed sensations of equilibrium? The stomach, by virtue of the inertia of its contents, and the liver by virtue of its own inertia and the fact that it is the only heavy organ so placed in the body that changes in its inertia can readily be appreciated, are admirably adapted to transmit sensations of equilibrium. Any afferent message which they transmit to conscious centers must be by the pneumogastric nerves, and the overstimulation of one function of a nerve of manifold functions is apt to be associated with sensations apparently representing the nerve in other functions.

"I do not know of any experiments by which we can say positively that the semicircular canals have nothing to do with ideas of direction, but it is significant that nausea, or the feeling of disturbed equilibrium, does not arise from violent agitation of the head alone, but that it does arise from similar agitation of the trunk, while the head is held still."

In Ménière's disease, lesions in the semicircular canals are rather doubtful, as reports of autopsies made with preconceived ideas of the equilibratory function of these canals usually limit the lesion observed to "congestion," which is notoriously subject to the personal equation or liable to be due to post-mortem changes.

J. L. M.

Gelsemium.—M. W. Van Denburg, *Amer. Hom.*, September 15, 1900.

The doctor has found the following symptoms in Hering, but omitted from "Allen's Handbook," very good indications for the remedy, curing every case very quickly. "Pharyngeal inflam-

mation, with pain on swallowing, shooting up into the ear. Catarrhal deafness, with pain from throat to middle ear. Coryza in changeable weather, with inflammation of upper part of throat, and shooting pains into the ear when swallowing." It is probably a catarrh of the Eustachian tube. It has also apparently aborted quinsy with above symptoms, when given within the first ten hours. Gels. has more fever than sil. and less sensitiveness than hepar sulph.; curing within twelve or twenty-four hours after administration. Sufficient tincture or 1 x is used to color water; "one teaspoonful very often until head begins to swim and the eyes blur."

A. W. P.

Primary Epithelioma of the Antrum of Highmore.—
Holbrook Curtis, *The Lar.*, October, 1900.

On account of this condition being so rare in this locality we make this note. Female, æt. fifty years, complained of severe neuralgic pains in distribution of fifth and seventh nerve of left side, aggravated by pressure over left antrum; which was opaque on transillumination, but contained *no* pus, and very little mucus; nares apparently normal. Exploratory opening through first molar socket brought away "a bloody discharge intermixed with brown caseous material." Ten days after exploratory incision left nares became occluded and left jaw "became peculiarly sensitive, swollen, and discolored." Fifteenth day, cheek became swollen and œdematous, and region of third molar alveolus soft and broken down.

Operation. Made opening involving the three posterior root cavities and canine fossa, and curetted antrum. "The floor of the orbit was like tissue paper, and the entire bony walls of the antrum seemed to be spongy and on point of breaking down."

The patient's strength did not allow resection of jaw. The disease progressed rapidly and death ensued in six weeks.

A. W. P.

Double Rupture of the Tympanum Caused from a Blow on the Face.—*Vrach. Homeop.*, citing *Przeglad. Lecarsky*.

PROFESSOR TEOFIL FALEWSKI reports a medical student was attacked by a madman, who struck him with the fist on the left ear. The hearing in this ear at once became impaired. In the external meatus was seen fluid blood; the lower edge of the

tympa-num was also covered with the same blood. By means of the Valsalva method, it was seen that the air escaped through two perforations about 3 or 4 mm. apart, in lower quadrant near the edge. Right ear normal. Tuning fork gave the following: Rinné, C—negative; Schwalach, C—positive; and Weber, C—in the left side. The author has come to the conclusion that the middle ear was injured; the inner ear remained intact. To clear (remove) the blood from the typanum, peroxide of hydrogen was prescribed.

After two weeks the tympanum healed perfectly; no scars remained, and the hearing was normal. ZECKHAUSEN.

Calcium Chloride as a Hæmostatic.—J. L. Hagadorn, in *The Amer. Hom.*, September, 1900.

This drug proved markedly curative in hæmoptysis and metrorrhagia, and author "thinks it promises to supply the much-longed-for clotting agent in hæmophilia."

It is used in 2-grain doses every two hours. Best administered as ten per cent. solution with water. A. W. P.

Exophthalmic Goiter Successfully Treated with Collodion Dressings.—Allen T. Haight, *The Recorder*, March, 1901.

The pathology of exophthalmic goiter has not been clearly established, but many recent observations clearly point to the thyroid gland as the most important factor. The majority of the authorities quoted coincide with Dr. Haight, first, that the toxic conditions are due to a secretion or overflow of secretion of the thyroids; second, that the toxic effect produces the exophthalmos and rapid heart. With the idea, therefore, that with the reduction of the goiter, the thyroid secretion and consequently the toxæmia is reduced, the writer during the last three years has painted the thyroid, in six cases, with flexible collodion. (None of the cases was of the variety of Graves' disease without enlargement of the thyroid). In each case all the symptoms were more or less decreased after the first application of the collodion. Four of the cases were cured, one greatly improved but lost track of, and one still under treatment. They were under observation three to six months, and each was kept on varying doses of syrup of hydriodic acid and iodide of potassium. Pressure on

the trachea by compressing the thyroid gland has not been irritating, except after the first application. The greatest discomfort is that they cannot move the head with ease. (1) The collodion must be absolutely fresh, so that the maximum degree of contraction will be obtained at each application. (2) Rapid evaporation, by using 20 to 30 lbs. air pressure, will increase the compression fully one-third. (3) The patient's head should be placed in an easy position, with the muscles relaxed. (4) The collodion may be applied with a brush or cotton carrier and the pressure should be kept constant by repeated applications, as required, at intervals from two to five days. J. L. M.

A Case of Jamaica Ginger Amblyopia.—Edwd. Stieren.—*Pennsylvania Med. Jour.*, September, 1900.

A careful search through American ophthalmic literature reveals eight recorded cases of blindness following the ingestion of ginger.

The history of the present case is as follows: N. C. R., æt. thirty-six; by occupation is a contractor and builder. His parents are living and healthy. Patient has always been well; has had some of the eruptive fevers of childhood, but does not remember which ones; has had several attacks of gonorrhea, but denies syphilis; has been a moderate user of tobacco, but a periodic alcoholic, going on a spree once every six weeks or two months, which usually lasted from three to four days. He is a robust, well-built man, 5 feet 9 inches in height, and weighs 180 pounds.

He was first seen Sunday evening, October 15, 1899, and appeared totally blind, requiring the services of a friend to lead him. He had been drinking heavily on Saturday, and, sobering up Sunday morning in a "dry" community where no liquor of any kind could be obtained, purchased from a storekeeper a box of a dozen bottles of Jamaica ginger, each containing about an ounce.

The entire dozen bottles were consumed before noon, the first four diluted with water, the remaining eight undiluted. About noon he dropped into a drunken stupor, awaking about 3 P. M. totally blind, but with no other symptoms except some gastric uneasiness and a dull headache. He was seen about 6 P. M., when examination revealed the following condition:

Pupils widely dilated and unaffected by light or accommo-

dation ; eyes widely open and the balls in constant motion, which could, however, be controlled by will ; conjunctivæ slightly injected, tension unchanged, media clear. There was no change whatever in disks or vessels, and beyond a slight amount of retinal œdema, fundi were normal.

Vision was almost nil ; he could see a hand move at twelve inches ; incandescent light had a red appearance to him. Cornea almost totally insensitive to touch with camel-hair pencil.

The treatment consisted of immediate confinement to bed in a darkened room. Three hot foot-baths were given during the night, and 20 grains each of calomel and compound jalap powder in divided doses. One-eighth grain pilocarpin muriate was given twice during the night, hypodermatically. This treatment caused active diaphoresis and catharsis, and at nine o'clock the next morning patient was able to count fingers with either eye at ten inches.

The pilocarpin was continued, $\frac{1}{8}$ grain hypodermatically at intervals of six hours, and calomel in 1-grain doses every two hours for the next two days. Pilocarpin was then discontinued and 20-grain doses of iodide of potassium supplanted the calomel, slight tenderness of the gums occurring.

Patient's vision continued to improve, and on the fifth day he was allowed to come to my office ; vision in each eye, $\frac{2}{30}$.

At no time was there any change or departure from the ophthalmoscopic picture first described. His field of vision could not be obtained when first seen, but in the second office examination, the fifth day after his indiscretion, no scotoma nor narrowing of the field could be demonstrated. Pupils now react strongly to light and accommodation. Can read Y1 with an effort and reads Y4 readily. Has 1 D. hypermetropia with which, corrected, V. in each eye = $\frac{2}{30}$.

I have seen this patient from time to time since his attack of acute blindness, the last time being March 27, and, having been thoroughly frightened, he has totally abstained from alcoholic stimulants. His ocular condition remains the same as just noted.

I believe, with Thompson and Woods, that the lesion in these cases is an acute retrobulbar neuritis, and incline strongly to the belief that it is of a toxic nature.

Conversation with various druggists and chemists brings out

the suspicion that the so-called "essences of ginger" which are sold so very cheaply contain but little ginger, the chief irritant in such preparations being, most probably, red pepper.

It is also just as probable that the alcohol used is the cheaper grades of wood alcohol. The writer endeavored to obtain a specimen of the essence used in the accompanying recorded case in order to have an analysis made, but was unsuccessful, so that the conclusions deducted must remain hypothetical.

However, the sudden onset in an individual who had practiced alcoholic indiscretions periodically for a number of years without any evil effects to his eyes, and who then becomes suddenly blind after drinking an enormous quantity of an irritating essence containing volatile oils, resins, and a questionable form of alcohol, makes the toxic factor in producing the neuritis seem quite probable. This belief is further strengthened when prompt eliminative measures are followed by improvement and cure.

DEADY.

On the Relation of Diseases of the Eye to those of the Teeth.—N. J. Weill.¹—*The Pennsylvania Medical Journal*, September, 1900.

Concerning this important subject, "On the relation or connection between diseases of the teeth and eye," comparatively little has been written by either the dentist or the ophthalmologist. This phase of medicine and dentistry belongs to the newer time. Whether morbid conditions of the eye do not frequently result in pain which the patient locates in the teeth, or whether the oculist has not been sufficiently and accurately observant of this connection, remains to be disclosed.

Galezowski is of the opinion that pathological conditions of the eye are as often the cause of dental neuralgia as the reverse.

It is not my object in this paper to refer to all the possibilities in this direction, but simply to mention a few of the more salient complications. A case, which occurred in my practice last winter, instigated me to inquire into the literature of this theme, and I thought an essence of the same might also interest your Dental Society, therefore this paper. In this case (Miss Sara B.) I prescribed hypermetropic lenses to her satisfaction some

¹ Read before the Odontological Society of Western Pennsylvania, Beaver, Pa., September 11, 1900.

months before, and instructed her to return for a prescription for stronger glasses as soon as she felt these insufficient. Patient was, to my mind, hypermetropic to such a degree that I ordered but partial correction. Some months later she consulted me because her right eye "watered" considerably and annoyed her in her work (sewing). Careful examination of the eye revealed nothing abnormal except the excessive flow of tears. The tear passage was entirely normal. Her right cheek appeared slightly swollen, and I accordingly looked to her mouth for the cause of this swelling. Upon my suggestion her teeth were examined and two roots of the superior right bicuspid extracted. The weeping soon ceased and the swelling of the cheek subsided. The sensory nerve supply to the lachrymal gland is the lachrymal branch of the ophthalmic division of the trigeminus, and branches of the superior and inferior division of this same nerve supply the teeth and surroundings with sensation; therefore, we must admit, *a priori*, the possibility of reflex action.

Then dental disorders may induce pathological conditions in the eye without the existence of any subjective intimations of pain in the teeth on the part of the patient. In other words, "toothache in the eye." The reverse must apply as well. In speaking of this subject with one of your members he related the case of a boy who had been treated for an ocular disturbance for some considerable time, but without relief. Upon examining his teeth, he found the lateral incisors had some difficulty in erupting. He aided the eruption; soon the eye symptoms disappeared and have not reappeared.

W. White Cooper in 1863 already recognized this relation of the eyes to the teeth and writes: "Inability to fix the eyes, without pain, for reading or writing; the greatest relief followed lancing of the gums over the wisdom teeth, which were about to burst through."

Pathological conditions of the eye or orbit can cause dental disturbances and vice versa, either reflexly or by continuity.

Those of the latter group are less frequent but graver, and will be considered first.

Hirsch found in the literature, up until 1894, twenty-five cases of orbital abscess caused either by septic infection following the extraction of teeth or by pustular alveolar periostitis. Since then Bauby, Hallauer, and Dagilaiski have reported similar cases.

Very serious outcomes can result from abscesses of the orbit as shown by Herman. He was able to find including his own material, 69 cases of orbital abscess recorded, in six of which death occurred, in seven the sight of the eye was lost, and in thirteen decided impairment of vision resulted. Orbital abscesses are primary or secondary in origin.

Orbital abscesses of dental origin can arise through the veins or lymphatics in one of two ways; either via the periosteum of the superior maxillary bone and the orbit or via the antrum of Highmore. According to Gurwitch, the first mode is explained by the plexus of veins under the anterior portion of the periosteum of the superior maxilla emptying into the ophthalmico-facial veins, which in turn anastomose with the superior and inferior ophthalmic veins. Hirsch believes his case to have originated in this way, and Dagilaiski had the same impression concerning his. The second mode of infection, via the antrum of Highmore, is the more frequent from the plexus of veins in the alveolus of a tooth into the antrum, thence from the veins in its outer wall to the ophthalmico-facial veins and so into the superior and inferior ophthalmic veins. Hallauer's case followed this course. Sovet reports a case in which, even after the extraction of the tooth, the periostitis continued and a periostitis of the orbit set in, followed by a retrobulbar abscess and destruction of the eye. Hermann also mentions cases where the pus in the antrum of Highmore found its way into the orbit only after destruction of the floor of the orbit. A timely operation in the case of an orbital abscess is not only rendered necessary as far as the eye itself is concerned, but also the proximity and approachability of the brain and its membranes must be borne constantly in mind.

The reflex currents can originate in the eye and manifest themselves by pain in the teeth, but the reverse neuroses, i. e., the teeth causing the eye disturbance, are probably more frequent if the literature on this subject is any criterion.

Catheterization of the nasal duct commonly gives rise to dental neuralgia of various intensities. Galezowski cites a case where iritis had existed for fifteen days, associated with great dental neuralgia on the side of the affected eye. A dentist had successfully extracted two molars eight days previously, not only without any relief, but with a distinct exacerbation of both. The

usual treatment for iritis gave speedy relief both from the iritis, which was the exciting cause, and from the reflexly induced dental symptoms. Five months afterward the patient reappeared with exactly the same affection both of the eye and of the teeth, and was again cured by the same means as before. Similar cases are by no means rare and have come under the observation of most ophthalmologists, the ocular symptoms preponderating in severity. This class of cases Jonathan Hutchinson, Sr., enriched by publishing the case of a young man, the subject of acute ulcers of the cornea from injury, with hypopyon, chemosis, and much pain, who complained that his eye made his teeth and ears ache. In this instance a pain beginning, peripherally, in the eye, induced pain in two other distinct and somewhat distant peripheral parts. Hutchinson believes that the rebound of the centripetal irritation probably took place from a deeper center than the ciliary ganglion or any anastomoses upon the cavernous sinus.

Brubacher says that the two senses, seeing and hearing, are most frequently set upon and injured by the reflex neuroses starting from the teeth. He further writes there can be little doubt that there are trophic nerve fibers running from the cerebrum to subordinate ganglia, and thence to the tissues whose function, apart from the blood-supply regulated by the vasomotor system, is to govern the metabolism of the tissues. It is quite certain that such fibers pass to the eye, and that such a ganglionic center exists in the Gasserian ganglion; probably but few of the eye disturbances reflexly produced are of this nature. The indication seems rather to be that these ocular affections are largely inhibitory in character and cerebral in origin—a fact readily understood when we consider that the central origins of the fifth nerve are intimately and anatomically associated with the centers of every motor nerve proceeding from the region of the fourth ventricle and especially with the third, which last is again united under the aqueduct of Sylvius with the fourth and sixth.

It must be noted that the pathological conditions of the teeth which, by intermediation of the nervous system, result in ocular disorder affect no special tissue or type of inflammation in the eye. In its commonest form this reflex action is seen daily in those suffering from toothache: the eyes often appear reddened

(conjunctival irritation) and tears flow more readily than normally. Pustular alveolar periostitis frequently produces œdema of the eyelids of the same side.

Hancock reported the cure of a case of divergent strabismus and ptosis of the left upper eyelid in a female aged twenty-nine years by the extraction of two carious left upper molar teeth, which caused the patient no pain. She was ordered 10 grains of quinine daily. In about four weeks she was discharged cured. The strabismus had existed for three years, the ptosis only for about two weeks. The mischief came on suddenly without pain either in head or eyes.

In 1881 Power related marked improvement in an unmarried female, aged thirty-three, affected with bilateral ptosis of two weeks' standing, by the extraction of diseased teeth. Before the extraction he supposed the ptosis to be of hysterical origin, and all moral and medicinal means were employed for her relief without avail.

Ely reports an instructive case in this direction. Male, aged twenty-six, complains that vision of his right eye had suddenly become blurred and that he sees double with that eye. No pain or redness. Pupil small and movable. Fundus of the eye normal. Has paresis of the right orbicularis, lids cannot be completely closed, and eye is very watery.

$$\text{Visus} = \frac{20}{50}, \text{ and with } + \frac{1}{36} \text{ c. } 180^\circ = \frac{20}{20}.$$

A careful examination of the teeth shows nothing abnormal. Patient was ordered to take mercury and iodide of potassium, which he did for some time without benefit. One night he was seized with severe pain in one of his upper molar teeth. The next day the tooth was extracted and an abscess, which had formed about its root, was evacuated. Paresis of the orbicularis muscle, diplopia, and astigmia disappeared immediately, and visus became $\frac{20}{20}$ without any glass. Ely claims there was no doubt about the astigmia in the case, as the vision was subjected to the most careful tests. The same author reported paresis of a rectus and the ciliary muscle in one case, and partial paresis of a third nerve in another, cured after needed attention was given decayed teeth.

S. J. Hutchinson related before the Odontological Society of Great Britain the case of a lady who had suffered for several

months from a spasm of the left upper eyelid. The eyelid was drawn up by a constant spasmodic contraction of the levator palpebræ in such a manner as to expose the whole of the iris and a portion of the sclerotica—lagophthalmus. Several decayed teeth were removed. The patient was relieved from the neuralgia from which she had suffered, but the spasm of the eyelid was not lessened. A year later, the patient being in the same condition, he again examined her teeth and found, as the only possible source of irritation, an amalgam filling in the upper first molar. This was removed, and it was found that there was a minute exposure of the pulp on which the filling pressed. The tooth was removed. The condition at once improved, and at the end of six months she was almost entirely well.

Corbett reported the case of a girl, aged fifteen, subject to copious lachrymation on each occasion that she left the house for outdoor exercise. Upon examination he found the cuspidati of the upper jaw absent, though the dental arch was perfect. Understanding that no teeth had been extracted from the child, he removed the bicuspid on each side. Within one week a manifest improvement was observable, and within three months all inconvenience had passed away when the cuspidati made their appearance.

To these cases of neuralgia of the eyeball and surroundings produced by dental irritation McQuillen added an important report, a case of severe attack of neuralgia of right side of face, extending to the temporal and frontal region and involving the right eye. Her physician being under the impression that the teeth were at fault, brought her to him. The pulp of the right canine was found exposed; four of the other teeth were also badly decayed, and it was thought advisable to extract all of them and make a new operation in place of the defective set which the patient was wearing at the time. There was not the slightest recurrence of the neuralgic pains. McQuillen adds that, if every physician recognized the importance of a prompt examination of the teeth under similar circumstances, a great deal of unnecessary pain could be spared their patients.

Among others, Hutchinson and Dowse have published similar cases.

Wright tells of the cure of a case of scleritis, as if by magic, by extraction of a painful second molar tooth of the same side.

Keyser reports a cure in a case of keratitis, which showed no sign of healing under the ordinary treatment, but did clear up under this same treatment after the extraction of a carious first molar tooth of the same side. The patient states that he suffered for months, off and on, with severe toothache.

Cases of simple conjunctivitis, phlyctenular or eczematous conjunctivitis in children consequent upon the irritation of dentition, are relatively frequent. In those cases of unilateral irido-plegia or mydriasis, where a cause is not apparent, the teeth should always be carefully examined. Desmarres reported a complete cure of such a case by the extraction of a carious molar.

Schmidt-Rimpler investigated the effect of dental lesions on the accommodation of the eye. He found the power of accommodation of the eye on the same side as the dental irritation lessened in thirty-seven per cent. of the cases examined. In eight cases, which he could repeatedly examine both during and after the dental paroxysm, he found five in which the power of accommodation gradually returned to normal after the toothache had been disposed of. In no case was this inhibition of accommodation apparent to the patient. *Cessante causa, cessat effectus*. He believes this interference with the accommodation to be brought about by increased intraocular tension, which is dependent upon a reflex irritation of the vasomotor nerves of the eye. This lessening of the accommodation was most frequent in the young, seldom happening in those above thirty.

Priestly Smith showed the effect of painful pathological dental conditions on the intra-ocular tension. He found a distinct difference in the tension in the two eyes in six cases out of sixteen. But in three of these the eye of the painful side was the harder of the two ; in three others it was the softer.

Creniceau saw a case of acute inflammatory glaucoma following a severe attack of odontalgia.

Swanzy, the eminent Dublin oculist, writes : Reflex amblyopia is said to have been observed and chiefly in connection with irritation of the fifth pair, especially the dental branches, but I have not seen these cases and I am skeptical as to their occurrence. Carious molar teeth are said to be its frequent cause, usually with severe toothache, and it is nearly always most marked on that side. In refutation De Wecker, a prominent Parisian

authority, relates the case of a seamstress, in whom the sight of both eyes was reduced to the mere perception of light, *i. e.*, the power to distinguish between darkness and light—after repeated severe attacks of toothache. Extraction of the carious teeth from the left side of the jaw resulted in the restoration of normal vision to the left eye only ; and later extraction of those from the right side, in perfect vision with the right eye. Many other cases of this remarkable type are reported, the latest probably by Sloggett. Amaurosis, *i. e.*, complete loss of vision, of the left eye in a female Hawaiian, aged thirty-six, was cured by the extraction of carious and dead teeth. DEADY.

Septic Process in Eye Disease.—G. R. J. Crawford.
—*Marit. Med. News.*, October, 1900.

Gayet in 178 cases washed out the conjunctival sac with 1-6000 sublimate solution ; after the washing, a sterilized platinum wire was passed over the conjunctival surface and *then* dipped into a culture medium contained in test tubes. In spite of the washing, 139 tubes remained fertile, 39 sterile. Among the fertile germs the cocci of suppuration were proved by positive results in eleven inoculations. R. I. L.

Facial Neuralgia Cured by Resection of the Superior Cervical Ganglion.—*Ophth. Klin.*, August 20, 1900.

CHISSAULT reports good results and no fatalities in 50 cases of obstinate facial neuralgia by a resection of the superior cervical ganglion, which has the advantage over other operations of having the wound in the neck and not on the face ; thereby avoiding any noticeable scar. One case was of thirty-three years' duration and was relieved forty-eight hours after operation—prior to which nothing would control the pain. C. G.

Movements of the Pupil. Experimental Investigations and Studies upon the Course of the Pupillary and Visual Fibers, with Discussion upon the Physiology and Pathology of the Movements of the Pupil.—Bach.—*Phil. Med. Jour.*, January, 5, 1901, abstracting *Deutsch. Zeitschr. f. Nervenhe.*, B. 17. H. 5 u. 6.

In rabbits, cats, apes, and men about one-third of the fibers do not decussate ; there is apparently no direct communication

between the optic fibers going to the corpora quadrigemina and the oculomotor nucleus, nor between the optic fibers and the centers in the cervical cord and medulla that govern the movements of the pupil. The pupillary fibers that decussate in the chiasm decussate again further back in the brain; this is proved by homolateral pupillary reaction that occurs in animals, *e. g.*, pigeons, that have total decussation of the optic nerves. The descending pupillary reflex tract, from the primary optic ganglia to the medulla, is probably a portion of the fillet; the ascending tract to the oculomotor nucleus is almost certainly the posterior long tract. It is not necessary to accept an intimate anatomic relation between the cells for the sphincter muscles of the pupil in the oculomotor nucleus and the various centers. [J. S.]

The Cortical Localization of Sight and Hearing.—
Clarence A. Good, *Am. Jour. of Med. Sci.*, December, 1900.

Concludes from the case he reports: 1. Destruction of the cortical visual areas will lead to a degeneration of the cells in the geniculate ganglia and the corpora quadrigemina, and to a degeneration of the nerve fibers of the optic tracts and nerves. 2. The macula lutea of one eye is in connection with the opposite angular gyrus. J. L. M.

The Douche in the Treatment of Ophthalmia Neonatorum.—E. E. Holt. *J. of A. M. A.*, January, 1901.

In a critical case he pressed the No. 1 pipe of a Davidson's syringe between the lids at the outer canthus and threw a stream of tepid 1 per cent. of boric acid, a quart or more for each eye. The point of the syringe was always directed away from the eyeball and was gradually worked along the whole length of the retrotarsal fold so that the conjunctival sac was thoroughly washed out. This was repeated every half hour, night and day, for the first twenty-four hours; then less frequently, and at the end of the fifth day the baby was opening its eyes and looking about the room. The cornea cleared and recovery was complete. The Davidson Rubber Company now make a hook-like point which has several openings at its end that may be attached to the syringe and used instead of the No. 1 point that comes with the syringe. R. I. L.

Chelidonium and the Respiratory System.—Dr. Neatby, *Amer. Hom.*, October, 1900.

As this drug is but seldom prescribed for coughs, we insert the following as a reminder.

The cough varies. We find frequent dry cough; tickling in larynx, and short, dry cough; severe fit of coughing without expectoration; violent and slightly spasmodic cough; expectoration of mucus; hawking up lumps of phlegm; irritation of larynx causing cough, became so bad in the evening as to produce lachrymation; coughing, with painful contraction of the abdomen; hoarseness, with dry cough, which at times brought up lumps of mucus.

Dyspnœa and oppression of the chest are very conspicuous among the effects of chelidonium. We find embarrassed respiration, especially while reading; a "sudden fit of asthma" during urination—can only breathe quickly and with exertion, as if he must choke with anguish; dyspnœa, with longing for fresh air in order to breathe more easily; on waking, pressure on chest and constriction—he cannot draw in enough breath at each inspiration, and therefore soon expels the air to inspire more, but a few very deep inspirations relieve this distress; loud-toned, rapid, whistling respiration during sleep; tightness of chest, as if compressed by a cuirass; violent pain at every breath, all round lower angles of shoulder blades; obliged to sit upright and cannot move, because it makes the pain in the chest intolerable; dyspnœa from a sensation as if the throat were swollen; oppression and dyspnœa, as if breast were tied together and she could not breathe.

In a later issue St. Clair Smith adds this as a verified symptom: "A tired volition or short exhausting cough excited by a sensation of dust in the trachea, throat, and behind the sternum, which is not relieved by coughing."

A. W. P.

"Holes" at the Macula.

MR. F. M. OGILVIE read a paper to the Edinburgh Medico-Chir. Society (*Brit. Med. Jour.*, July, 1900), on one of the results of concussion injuries of the eye—"holes" at the macula. He had collected all the published cases presenting this lesion, and divided them into two large classes: (a) those in which

there was no detachment of the retina, and (b) those in which detachment was present. He advanced several theories to account for the holes which, as a rule, were about $1\frac{1}{2}$ diopter in depth, and summarized the conditions brought about as follows: (1) The lesions are definite and central; (2) they are the direct result of violence; (3) the injuries are permanent; (4) the general disturbance of vision is not great; (5) they are the result of concussion injuries only.

R. I. L.

Optic Nerve Atrophy from Parotitis.—Von Dor, *Ophthalm. Klin.*, November 5, 1900.

Calls attention to numerous cases of post-neuritic atrophy of the optic nerve, occurring in the French army, which could be traced to no other cause than parotitis; the optic trouble in his opinion is caused by compression of the blood vessels in the region of the parotid glands and subsequent intracranial and intraocular congestion. The cases have been so frequent that the authorities have sent out special orders to army surgeons to be on the alert for eye symptoms during the course of parotitis as well as some time subsequent thereto.

C. G.

Sudden Blindness after Nasal Cauterization.—Albert Rufus Baker, *Cleveland Med. Gaz.*, October, 1900.

Patient had middle turbinate cauterized on November 1, a week later pain in the back of the right eyeball. Chill on the 24th and again on 27th, when blurring of right vision began. Next day lower half of field was lost and soon the whole field. December 3, left eye began to fail, and on the 7th $V = \frac{2}{60}$. At this time right eye = no light perception, pupil dilated, no reaction to light or accommodation; fundus normal. Under increasing doses of pot. iod. left vision by December 13 was $\frac{2}{30}$, and the right eye had perception of light. January 19, vision o. u. $\frac{2}{30}$. Bishop reports a case by Alt of optic neuritis in a syphilitis after cauterization.

R. I. L.

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BOOK REVIEWS.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1901. Vol. II. General Surgery, including Ophthalmology, Otology, and Diseases of the Nose and Larynx. 610 pages. A yearly digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Arranged with critical editorial comments by eminent American specialists, under the general editorial charge of DR. GEO. M. GOULD. In two volumes. Octavo. Illustrated. Philadelphia and London: W. B. Saunders & Co. Per volume: cloth, \$3.00 net; half morocco, \$3.75 net.

The chapter on Ophthalmology, 42 pages, is edited by Howard F. Hansell and Wendell Reber; that on Otology, 22 pages, by Charles H. Burnett; and that on Diseases of the Nose and Larynx, 31 pages, by E. Fletcher Ingalls and Henry G. Ohls. An admirable publication.

The bacterial work of the past four or five years shows the futility of all attempts to render the conjunctival sac absolutely aseptic before operating. In general infection from the conjunctival sac the nasal mucous membrane is the real entrance point.

S. O. Richey is quoted (*Phil. Mo. Med. Jour.*, July, 1899) as attributing both inflammatory and non-inflammatory forms of glaucoma to the gouty diathesis; he considers closure of the filtration angle a result of the glaucomatous process.

Largin, the latest silver nitrate substitute, is richer in the metal than any of the others, having 11 per cent. Its watery solution keeps well in suitable vials, and is precipitated neither by albumin nor by chlorides. It is painless, even in concentrated form, but prolonged use will stain the conjunctiva like protargol. Euphthalmin 10 per cent. produced no subjective symptoms, furnished mydriasis for about thirty minutes, was without effect on the accommodation, the ocular tension, the vessels of the con-

junctiva, or the corneal epithelium, and was non-poisonous. Chloretone, besides being a hypnotic and antiseptic, is a mild local anæsthetic that does not affect the pupil or accommodation, but does not anæsthetize the deep layers of the cornea. Dionin promises to be a powerful long-acting, analgesic, in 2 per cent., 5 per cent., and 10 per cent. solutions or in actual powder. Supra-renal extract hastens absorption of mydriatics and myotics, which usually lie almost inert in the conjunctival sac of a badly inflamed eye; this because of, or in addition to, its astringent or hæmostatic power.

Excision of the malleus and incus for the cure of chronic otitis media purulenta has been to a great degree unjustly superseded by the radical mastoid operation. If performed in time, it will often save a mastoid operation.

“When a pyogenic lesion exists in the middle ear, or its adnexa, which is either not accessible or which cannot effectually be eradicated through the external ear, the mastoid antrum and cells *should be opened*” (Mac Ewen). Tympano-mastoid exenteration is one of the most complicated operations in surgery. The four great technical difficulties are: (1) Thorough cleansing of the cavity made; (2) getting the exposed bone covered; (3) keeping down exuberant granulation; (4) producing epidermization of the new cavity, with permanent retro-auricular opening. (J. Orme Green). Dench closes the retro-auricular wound by first intention. He does not advise the Stacke-Schwartz operation in chronic otorrhœa until excision of the ossicles and curetting the diseased tympanum have failed. C. J. Blake demonstrated afresh the value of the bloodclot in mastoid operations as a substitute for the usual packing and granulations; of course, all diseased tissue having been removed.

Hypertrophied inferior turbinate is preferably reduced by sub-mucous reduction with burs and trephines; this can be done quickly, leaving the nasal chambers practically normal. Ostmann claims that all hæmorrhage is avoided in the removal of posterior hypertrophies as follows: With a flat point cauterize down to the bone in a curved line from behind forward, just above the lower margin of the turbinate, occluding the main vessels; the mass is then removed with the cold snare after tightening the loop for about a minute. Ordinary linear cauterization destroys too much superficial tissue, Beaman Douglas concludes from

microscopic study of sections of the turbinate at different intervals after cauterization. A small, stiff wire loop is better than a knife electrode; increase the current after it has penetrated the epithelium and hyaline membranes at a moderate heat; the heat should be somewhat reduced again before withdrawing the point. Fifty per cent. alcohol is recommended as the best application (or vehicle for another antiseptic) for all vegetable parasites of the mouth. An alarming case of hiccough was completely relieved by pressing firmly on the base of the tongue with a large spoon handle.

J. L. M.

UROPOIETIC DISEASES. By BUKK G. CARLETON, M. D., author of "Genito-Urinary and Venereal Diseases," "Disorders of the Sexual Organs of Men," etc. Second edition, revised and enlarged. Illustrated with 33 photo-micrographs and 6 luco-type figures. New York: Boericke & Runyon Co., 1900. pp. 384.

The title has been changed in this edition because bladder troubles have been included. The size is greater by many new sections and much new material, especially on the ætiology of Bright's disease and uræmia. Two chapters are devoted to vesical and renal homœopathic therapeutics. An invaluable book—as are all that Dr. Carleton writes—and one that no general practitioner should be without.

J. L. M.

A TREATISE OF THE DISEASES OF THE EAR, Including the Anatomy and Physiology of the Organ, together with the Treatment of the Affections of the Nose and Pharynx which Conduce to Aural Disease. By T. MARK HORELL, F. R. C. S. Edin., M. R. C. S. Eng., Aural Surgeon to the London Hospital; Consulting Surgeon to the Hospital for Diseases of the Throat, Golden Square; Lecturer on Diseases of the Throat, London Hospital Medical College; Aural Surgeon, British Home for Incurables. Second Edition. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St., 1901. Printed in Great Britain. Price, \$5.50.

The work under consideration is a very full and thorough text-book, reminding one somewhat of Politzer's work, except that the author does not force his own views so markedly on the reader as in the earlier book; although in the treatment of many conditions, while he gives the methods of the accepted authorities, he finishes with his own practice, which is frequently

a continuation of two or more, or a slight modification of some one.

The mode of consideration is brought right up to date, as may be seen by the space given to the subjects in the following chapters: "Diseases of Nose, Pharynx and Naso-Pharynx Connected with Diseases of the Middle Ear," 50 pp.; "Local and General Affections liable to cause Disordered Hearing" (dependence of the ear upon the general organism), 40 pp.; "Cranial and Other Complications of Middle Ear Disease," 45 pp., and "Life Insurance and Diseases of the Ear, and Military Regulations."

It is a book instructive to the specialist and one that should be in the hands of every special student.

The portion of the work for which the publisher is responsible is in full keeping with the commendable character of the text.

A. W. P.

VARIOUS VERSES. By WILLIAM TOD HELMUTH. *Μέγα βιβλίον, μέγα κακόν*. Boericke & Tafel, 1901. Pp. 79, deckel edge. Price: cloth, \$1.00 net; by mail, \$1.05.

A tastily gotten up, beautifully printed little volume that may soothe the impatient spirit of a waiting patient, but which goes especially to the heart of every member of that world-wide guild "Helmuth's boys"—awakening pleasant memories of evenings and days enlivened by the genial companionship of our beloved Nestor.

J. L. M.

THE YEAR BOOK OF THE NOSE, THROAT, AND EAR. The Nose and Throat, edited by C. P. HEAD, M. D., Professor of Laryngology and Rhinology in the Post-Graduate Medical School of Chicago. The Ear, edited by ALBERT H. ANDREWS, M. D., Professor of Otology in the Post-Graduate Medical School of Chicago; Oculist and Aurist to the German-American Hospital, Chicago; Oculist and Aurist to the Chicago, Rock Island, and Pacific Railway. The Year Book Publishers, 100 State Street, Chicago, 1901. Price, \$2.00.

We are all probably familiar with Sajous' Annual or the International Medical Annual,—the position which these annuals fill for the general practitioner is most thoroughly and admirably filled for the specialist in the nose, throat, and ear by this book.

It gives the progress of knowledge in our specialties, therefore deals almost exclusively with journals, although it has drawn from some monographs, as also three of the principal special

societies of the States and England. There have been 301 periodicals in all, from the English, German, French, Italian, Spanish, Russian, and Swedish literature, used in its compilation.

While it gives the kernel of the different articles, reference in every case is so made that the reader may readily ascertain the exact issue of the medical periodical from which said abstract was taken.

In order to keep the book within somewhat convenient size and spare the reader perusing paragraphs on well-known subjects, the authors have exercised their rightful prerogative of omitting mention of papers containing nothing original.

A full index, including both names of diseases, etc., and authors, makes reference easy, while the typography makes perusal the same.

A. W. P.

A TEXT-BOOK OF DISEASES OF THE NOSE AND THROAT. By D. BRADEN KYLE, M. D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College; Consulting Laryngologist, Rhinologist, and Otologist, St. Agnes' Hospital; Bacteriologist to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases; Fellow of the American Laryngological Association, etc. With 175 illustrations, 23 of them in colors. Second Edition. Philadelphia: W. B. Saunders & Co., 1900. Price, \$4.00 net.

Scarcely a year ago we took pleasure and obtained much instruction from a thorough perusal of this work for review in these columns. The first edition deserved our indorsement and highest recommendation, and the second one rightfully merits the same. So little time having lapsed between these editions, little difference in text can be expected.

For the benefit of those who did not see the former review, we would repeat that "the most striking feature is that the subject is viewed or considered from a pathological standpoint." . . . "The macroscopical and microscopical pathology of the sundry diseases is more thoroughly treated than in any other text-book on this subject in the English language that I know of." . . . "The relation or interdependence of this and other portions of the system is most forcibly brought out."

The mere fact of the first edition of this book being exhausted in such a phenomenally short time, and that, too, at a period when so many books are being published in this specialty, in itself indicates the value of this work.

A. W. P.

THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

EDITOR,

JOHN L. MOFFAT, M. D.

ASSOCIATE EDITOR,

A. W. PALMER, M. D.

WOUNDS OF THE EYEBALL.

ISAAC C. SOULÉ, PH. D., M. D.,

Kansas City, Mo.

ONE of the most serious, at the same time least familiar and happily infrequent conditions that the general practitioner is called upon to treat is that of wounds of the ocular globe.

Our authors of text-books seem for the most part to think these conditions of very little importance, or are like a certain lecturer on otology whom I once heard lecturing on catarrhal diseases of the ear, and who wound up his description of each separate disease somewhat after this wise: "The treatment is very complicated and difficult. When you get cases of this kind you had best send them to an ear specialist." While this advice undoubtedly tended to increase his profit, it did not enlighten his students to any great extent.

Usually the descriptions and treatments of wounds are parceled out under the various classifications of the eye, as cornea, sclera, choroid, etc., and when the persevering M. D. has finally found what he is looking for, like as not he meets this cheerful advice: "When the foreign body has penetrated the interior, or there is reason to believe that it has, the safest and best procedure is enucleation, even if the wound has apparently healed and there be no signs of

irritation in the other eye." I have quoted from one of the standard authors in the above, and it does not differ materially from what one will find in the great majority of books; even when some other consideration has been given, the ultimate fate one is gently introduced to is enucleation.

I can see some excuse for this in the earlier writers, but one is somewhat surprised to find it in homœopathic books and other late and up-to-date works. It is true that occasionally, even when the wound has kindly healed and the eye has remained quiescent for years (in one instance coming under my observation twenty years), trouble will be occasioned by the old foreign body still present in its interior; but when this happens one may still do the enucleation, and the patient will have had the eye for all those years. Even a poor, ill-shaped, or collapsed eyeball is better as a base of an artificial eye than the stumps usually obtained by any of the operations for removal of the globe.

Surgery and surgical treatment of diseased conditions have been compared to the swinging of a pendulum. We have had the era of the application of the knife upon the slightest indication or excuse for its use, at least in ophthalmology, and the pendulum has commenced to swing by popular demand to the other extreme. There is, however, a happy medium ground of conservatism, which we should strive to occupy.

The treatment spoken of as expectant in the medical works of thirty-five or forty years ago is still good treatment, even in the excessively enlightened, "bugology" twentieth century, and when combined with the advice of old Professor F. H. Hamilton (which, though homely, was sound), to "use good, common horse sense and lots of it," re-enforced with the indicated remedy, will meet with a far greater number of successes than failures.

Wounds naturally divide themselves into non-penetrating and penetrating. In the former class come almost all foreign bodies, blows, etc.; these may be dismissed with but brief consideration. Foreign bodies usually wound only

the external layers of the cornea or the conjunctiva, and may be removed by either the use of a few fibers of cotton so wound about a probe or toothpick as to leave those at the extremity loose and fluffy to catch the foreign body in their meshes when they are drawn with a sort of rotary motion over it, or better yet by means of a very small, sharp curette (one-half line in diameter) such as I have had Meyrowitz make for me. If the offending object has been small and the wound correspondingly slight, it is sufficient to place in the eye three or four drops of pure olive oil and use a light protective bandage which does not exert any pressure on the eye. If, however, the wound is of greater extent or has pus present in it, the curettement should extend to the removal of all dead tissue, the eye carefully washed out with a solution of formalin (one drop of the forty per cent. to the ounce of distilled water*), dressed with a liberal dusting of protonuclein special, bandaged, and the indicated remedy administered internally.

When the globe has been ruptured, as by a severe blow, and there has occurred a protrusion of either the iris, lens, or vitreous, we have to deal with a condition of far graver moment. If the protruding part cannot be replaced, if it be badly lacerated, bruised, or there is any question as to its being perfectly clean, it should be carefully snipped off with the scissors, having been drawn out slightly. The wound should be carefully cleansed and closed with fine silk sutures dressed with borated calendula powder, bandaged, and the indicated remedy—aconite, arnica, or hypericum—given.

Penetrating wounds—that is, those made by a body which penetrates the interior of the globe—divide themselves into those in which the wounding object remains or has possibly remained within the globe, and those in which it is known not to have done so. These latter require only careful cleansing, closure, and dressing, unless complicated by the extrusion of some of the internal portions, when the wound should be treated as already described.

*This will smart; use five minims to the pint—about 1:3000.—ED.

Penetrating wounds when the missile is known to be, or in all likelihood is, still within the globe, demand more careful consideration and watchful care. First, the prognosis and treatment must largely depend upon the nature of the wounding object; the questions to be decided are: its liability to cause irritation and inflammation by its presence; its solubility or insolubility; whether it will tend to remain stationary in one place and become encapsulated; or will it be migratory? Is it poisonous or non-poisonous; can it be safely extracted, or had it better be left alone? Where is it in relation to the nerve head and fovea centralis? Is the nerve or the lens injured? All of these questions many times cannot be at once answered; only probable theories evolved, acted upon, and results awaited.

The most favorable missiles are those quite or nearly insoluble, non-poisonous, and approaching a globular outline, such as gold, silver, soft lead, or thin quartz. The least favorable are those partially soluble, poisonous, and of irregular or needle-like shape, such as copper, splinters of steel and wood.

The former become easily and quickly encapsulated, and because of their shape tend to remain stationary; the latter not only are prone to move about by being partially soluble but encapsulate slowly, imperfectly, or not at all, hence are liable to be loosened by any sudden jar or blow. In deciding as to whether or not it may be safely extracted, one must of necessity consider its location, the nature of the missile, and the nature of the tissue in which it is embedded. The locations and the tissues wounded in reaching its resting place must be decided largely from the history of the wound: how it happened; the direction and velocity of the flight of the wounding object; whether or not it entered the eyeball direct, punctured the lid, or was deflected from its true course by striking some object before entering the eye. I believe it is safer, at all times, to base our line of action on results obtained from a careful consideration of these data than to attempt to locate the offensive particle with a probe. Usually all hope of loca-

tion by means of the ophthalmoscope is destroyed by the presence of hæmorrhage. Should the history of the accident be such as to lead one to conclude that no important tissues have been injured, that the wounding object belongs to the favorable class or has entered with sufficient force to, in all probability, entirely penetrate through the globe and lodge in the loose adipose tissue of the orbit, it is good surgery to not practice meddlesome surgery, but to let the wounded eye alone, having carefully dressed it. One may even give a guardedly favorable prognosis.

Even when, under the like circumstances, important tissues, such as the iris, lens, and ciliary body have been wounded, the patient's best interests are conserved by the same line of treatment; occasionally, apparently hopelessly ruined eyes may thus recover with a surprising amount of vision.

This class of cases, however, requires careful attention, constant watchfulness on the part of the surgeon, and implicit obedience from the patient, or all hope of a favorable termination must be abandoned.

They must be under the immediate charge of a careful, obedient nurse; must be kept perfectly quiet, as free from annoyance and worry as possible; the digestion kept in good working order, and they must obtain regular and liberal sleep. For the first one or two weeks they should be kept in one room—most of the time in a recumbent position. While the room should not be dark, it should be protected from the direct sun rays. For the first week both eyes should be bandaged. After that, if progress be favorable, only the sick eye need be so treated. At the end of two weeks the patient may be allowed to walk about the house, and a week later take short walks in the open air.

When the lens and its capsule have been wounded, close watch must be kept, lest the swollen lens-tissue cause an increase in tension, with consequent glaucomatous symptoms. Should they arise, the swollen mass should be extracted at once, as its presence, if allowed to remain, will preclude a favorable termination of the case. Less risk is

run in operating early than by deferring until additional inflammation has been excited.

Where the iris has been wounded, particularly if at or near its periphery, the custom is to instill eserin. This, I think, is bad surgery, because the goal aimed at is rest, and all know that eserin dropped into a perfectly normal eye will, if long continued, cause painful spasms of the ciliary muscle. In the large majority of these cases the ciliary body is also wounded.

Far better results will be obtained (or have been by me) by the use of scopolamin in the one-tenth of one per cent. solution. This drug does not tend to increase markedly the tension of the eye, and keeps the iris and ciliary body completely at rest. Its long-continued use, for one or two months, has no deleterious effects upon either the eye or the patient's general system, and if the lens be injured, gives more room in which it may swell. These cases, even after dismissal, must be kept under observation and cautioned against indulgence in excesses of all kinds, against undertakings which require great expenditure of nerve force, and worry, and against use of the wounded eye for at least ten months to two years after the accident.

The following case will aptly illustrate the foregoing line of treatment:

Late in November, 1899, a man, while hunting, was shot in the right eye with a stray No. 8 soft shot, which penetrated the upper lid and cornea, and wounded the iris. A physician who was on the spot found no hæmorrhage in the eye, nor escape of aqueous. The eye was immediately covered with a handkerchief wet with cold water. Throughout the night (on the train) iced cloths were applied, changed at least every five minutes, and the patient received aconite and arnica alternately every half hour. There was no pain, nor particular sensitiveness to pressure during the trip.

The next morning I examined the eye with Dr. James A. Campbell. The anterior chamber, which was intact and of usual depth, was partially filled with blood clot; there

was hæmorrhage into the vitreous, preventing a view of the fundus, but a fair reflex was obtainable. A small punctate wound was present, just internal to the nasal corneo-scleral junction, involving the iris close to its root. That portion of the iris was drawn toward the nasal side and seemed tucked or folded back. Vision, perception of light; tension, normal; no pain nor tenderness, except immediately over the site of the wound. While Dr. Campbell and I did not quite agree as to prognosis, both were unanimous in advising no interference with the eye, and in using conservative treatment. The eye was accordingly cleansed carefully, a few drops of scopolamin instilled, the patient put to bed, bandaged, in a northwest room, from which the sun was excluded, and the arnica continued. That night at about seven o'clock we saw the patient again, and Dr. Campbell succeeded in seeing some faint details of the fundus.

Treatment was continued for six weeks as above, when the scopolamin was discontinued for a few days and then used only once per day. During the seventh week patient had an attack of neuralgia of the third nerve, which was easily controlled.

Three months after the accident occurred vision was $\frac{2}{200}$. Calc. sulph. was given once a day for some time, vision steadily gaining until, when the patient was discharged, in August of the following year, his vision with -0.50 Dc. ax. 90° was $\frac{2}{30}$.

1103 Main Street.

SOME CONCLUSIONS FROM CLINICAL EXPERIENCE IN TREATMENT OF HYPERTROPHIED TONSILS.*

(With Exhibition of Some of the New Instruments for Removal of the Tonsils.)

A. WORRALL PALMER, M. D.,

New York City.

THE subject of hypertrophied tonsils has been so frequently considered in medical societies and journals that it is with a certain amount of trepidation that I dare occupy your time with it again.

In the spring of 1898 I had the pleasure of presenting to this society a paper upon a somewhat similar theme, advocating the more thorough ablation of the faucial tonsils, when the majority of the members, or at least of those that discussed it, were very much opposed to my ideas. Now I have had two and a half years more of experience, and am even stronger in my advocacy of as near total extirpation of an hypertrophied or diseased tonsil as is possible.

Because so thoroughly imbued with the good reasons for and the better results of this practice, I wish to-night to reiterate some of my reasons, call your attention to practitioners of the same opinion, and exhibit some of the improved instruments for such operation.

As thorough removal as possible of the hypertrophied or diseased faucial tonsils should be accomplished for the following reasons:

* Read before the New York Homœopathic County Society, April, 1901.

1. Although in the past it was believed by all, and at present it is held by the majority, that the portion of the faucial tonsils remaining after a partial extirpation will be caused to atrophy by the removal of the superficial part of said tonsil, I think this idea is erroneous and untenable. In some cases, I grant you that the tonsillar tissue may become atrophied after tonsillotomy. The amount of diminution is very slight, and where it occurs it is only the normal atrophy which the gland undergoes some years after adolescence. It seldom if ever occurs in childhood and shortly after puberty, the very time when the tonsil causes the most trouble.

To what may be attributed this idea that the tonsil is caused to diminish in size by partial amputation?

Tonsillotomy leaves quite a large raw surface after it to scab and heal over where it is impossible to dress it properly, and under almost the worst septic surroundings that can be imagined. The respired air, laden with microbes, is rushing past the denuded surface; this surface is kept damp by the mucus from the naso-pharynx and the saliva from the mouth, which retards healing. Each alone is bad, but combined they are still worse. The air brings the microbes, and the fluid covering the surface entraps and keeps such microbes in contact with the raw surface. This train of circumstances therefore causes quite a severe inflammation and consequent swelling of the cut surface immediately after operation, not infrequently ulceration when the patient is not in the best hygienic surroundings. The acute inflammation is soon over, but it leaves the lateral walls of the pharynx still slightly inflamed and swollen, for the entire subsidence of which inflammation some two to four weeks are required.

This therefore is my explanation: It is this reduction of the acute and subacute inflammation, and swelling consequent upon the naturally slow healing of the denuded surface under such necessarily non-hygienic surroundings, that has been mistaken for an atrophy caused by partial removal.

If other diseased tissues of the body are cut or irritated we believe they will be inflamed, and inflammation of tissue means hyperplasia of the cells of said tissue. Every surgeon admits this fact with regard to the third, or Luschka's tonsil. All affirm if not thoroughly extirpated it is very prone to regrow, and I can assure you from perusal of literature upon the pathology of these three tonsils, which I must admit is very meager, that they are identical, with the exception that the faucial collection of lymphoid tissue has slightly more connective tissue interspersed among it than that in the naso-pharynx.*

If therefore the third tonsil is very prone to return after partial removal, why will not the faucial tonsil under like circumstances do the same?

2. Hypertrophy of the faucial tonsil is frequently very deceiving. Those so deceiving we may divide into three classes: (*a*) hypertrophy with adhesion of faucial pillars; (*b*) the basic hypertrophy first described by Dr. R. C. Myles; and (*c*) a hypertrophy principally affecting the upper half of the gland.

(*a*) Regarding hypertrophy with adhesions of the pillars, so much has been said and written that it is needless to occupy your time to reconsider it.

(*b*) The basic hypertrophy of Myles is similar indeed to the latter, as it does not extend abnormally beyond the anterior pillar; the pillars are drawn forward similar to the last, thereby masking the extent or even the whole enlarge-

* NEW YORK, February 12, 1901.

Dr. A. W. PALMER.

Dear Doctor: The specimens of tonsil, faucial, lingual, and pharyngeal, have been examined and are found to consist of exactly the same kind of tissue. The bulk of the tissue consists of a delicate reticulum filled with lymph cells, forming what is called lymphoid tissue, or more correctly lymphadenoid tissue, being similar to the substance of the lymphatic glands. There is a surface covering of stratified epithelium which also lines the crypts, and is found in all specimens examined.

The only difference between the hard and the soft tonsils is the greater amount of fibrous connective tissue in the hard variety.

Very truly,

GEO. F. LAIDLAW.

ment; it differs from the last in this respect—that the superficial exposed surface of the glands is soft and quite normal in color and appearance; also if a probe be inserted in the slit between the tonsil and the anterior pillar it will enter the proper depth of one-eighth or three-sixteenths of an inch, showing that the increase of tissue is in the deeper portion or base of the gland. The diseased tissue is deep down.

Is it not needless to say that we must remove the deeper portions of such tonsil to cure the condition?

(c) The hypertrophy principally affecting the upper part of the tonsil I do not remember having seen mentioned. It mostly lies up between the pillars of the fauces, extending above the level of the velum palati, out of sight. It can only be discovered by digital palpation of upper extremity of the anterior pillar, or by retracting said tissue by the aid of some instrument, such as a ring probe.

In the natural state very little resistance is felt; but if the gland hyperplasia extends into this region, some hardened substance will be recognized by the exploring finger. This cannot be reached by the tonsillotome in the ordinary manner. It needs to be drawn down into the guillotine by some separate instrument, like my forceps, or gouged out with one similar to Dr. Myles'.

Allow me to slightly digress here and say that this is the part of the tonsil most interesting to the otologist because, by its proximity to the Eustachian tube, it may reduce the lumen of that outlet by pressure or inflammation extended to the ear from it by continuity of tissue; it also interferes with the action of the levator palati muscle in opening the middle third of the tube.

It might be interesting to state that this last class was brought to my notice little more than three years ago by a case referred to my clinic from the ear clinic.

A boy, about nine years of age, with otitis media purulenta chronica. I removed his tonsils in the usual manner, with but temporary benefit. When investigating to ascertain the reason of my failure, I detected the hardened tissue spoken of above,

located back of the pillar; this I removed with a small tonsillotome and tenaculum, with the satisfactory result of a permanent cessation of the aural discharge. It is not infrequently we hear of aural cases seemingly dependent upon tonsillar or adenoid complications in which tonsillotomy and odenotomy have given very unsatisfactory results. Is it not probable that this is because we as operators do not usually recognize the necessity of removing the upper part of the tonsil?

Since writing the above I have read an article entitled "The Importance of the Superior Pole of the Tonsil and the Supra-tonsillar Fossa in the Genesis of Suppurative Peri-tonsillitis and Prophylactic Extirpation of the Pole," by Dr. Richardo Bota of Barcelona, in the *Annales des Malades de l'Oreille*, in which the author attributes the failure to prevent the repetition of peri-tonsillitis after amygdalotomy (which not infrequently occurs) to the fact that physicians do not recognize the importance of the upper portion of the tonsil, and therefore are not careful to remove it when diseased. He explains clearly, and at length, judging from the relative position of the pillars of the fauces, the plica triangularis, and the superior pole of the tonsil, how the superior pole, or, as denominated in my former article, the upper portion of the tonsil, is unnoticed by the majority of observers.

3. Hypertrophied lymphoid tissue is usually diseased tissue; if not continuously, it is so at frequent intervals. Each succeeding attack is apt to be more prolonged or painful, and the intervals between such attacks become shorter. This is the rule until the patient is about twenty-five, and I have frequently noticed it to pertain until more than thirty years of age.

When it is advisable to remove diseased tissue from the system elsewhere, is it not deemed necessary to remove the whole? If such is proper elsewhere, why is it not here?

If considerable abnormal tissue is deleterious to the economy, a smaller amount is better for the patient, I admit; but none at all is best.

The proof of the pudding is in the eating.

Within a year I have performed fourteen or fifteen re-tonsillotomies; five of these in persons over eighteen, and most of the primary operations were done by physicians whom I believe understand their vocation and do good work. Do you wonder that as thorough extirpation as possible seems necessary after such experience?

Furthermore, the writer finds he is not alone in his radical views on this subject, for within the last two years several articles may be found advocating the same procedure; among them one by Dr. E. B. Hooker of Hartford, read at the O., O. & L. Society last June; one by Dr. W. S. Peters of Lafayette, Ind., whose snare I will show, and another by Dr. R. C. Myles, whose punch and knife I have here.

Someone may argue that there is no organ or tissue in the system which has not its own peculiar office to perform, and therefore plead for leaving some of the tonsillar tissue. This argument would be well made if the hypertrophy was not diseased tissue or predisposed to become diseased; but as with our present knowledge such disease is not amenable to the milder forms of treatment—medication—I see no way other than as thorough extirpation as possible.

The mode of operation usually employed is the tonsillotome, aided by my forceps, which draw the tonsil better into the guillotine than do the forks.

Since hearing Dr. Hooker's paper last June I have been experimenting with the snare; this, as the doctor said, seems to remove the gland more thoroughly, because, if the gland is engaged in the loop beyond the center, the diseased amygdala being more resistant than its connections with the lateral wall of the pharynx, the loop apparently slides back of the gland, shelling it out. This procedure is almost bloodless. But, on the other hand, it has its drawbacks; it is exceedingly painful, therefore making it inapplicable unless a general anæsthetic is employed. Furthermore, it is tedious; but this may be overcome by practice.

The plica triangularis is a fold of mucous membrane

extending downward and backward from the upper third of the anterior faucial pillar, in front of and beneath the tonsil, and inserted into the base of the tongue; it seems to act as a suspensory, holding the tonsil upward and outward against the lateral wall of the pharynx—that is, retaining it back of the anterior pillar. When the plica is incised the amygdala drops toward the median plane from behind the pillar.

From observations made during the last two years I say that incision of the plica should precede the operation of amygdalotomy.

138 West Eighty-first Street.

Discussion.

J. B. GARRISON: The position taken by Dr. Palmer is, in my opinion, good surgery. If an organ anywhere in the body is diseased and no longer able to perform its normal functions, we consider it to be a foreign body, and, as such, counsel its removal. If it is in a position where it can produce irritation by its presence, remove it; if it is to be removed, why not remove it thoroughly? The mode of removing the tonsils must be left to the judgment of the operator. If there has been previous inflammatory action, and we find the tonsillar tissue bound down by adhesions to the faucial pillars,—particularly the posterior,—we cannot expect relief until free action of these muscles is restored, and in these cases to break the adhesions without removing the tonsils will be futile, for readhesions will quickly occur, and the only mode of treatment must be thorough removal of all the tonsillar tissue. A very small portion of the tonsil, if adherent to the pillar, will cause a constant pharyngeal irritation; the removal of this seemingly harmless little piece will, however, be sufficient to make a complete cure. This is also the fact in many cases of coexisting ear trouble that have resisted all treatment. The instruments that Dr. Palmer shows you to-night are necessary and efficient to remove all that escapes the ordinary guillotine, and should always be at hand when tonsillotomy is to be performed.

Where the tonsils are simply hypertrophied and not adherent, I would counsel the use of remedies, carried out for a long time,

if necessary. I have at present a dozen or more cases of hypertrophied tonsils, mostly in young children, who have been taking remedies from one to six months, and improvement is noted in all.

The first thing noticed is that the sensation of a body in the throat becomes less, and the tendency to take cold is decreased. A little later the tonsils commence to lessen in size, but that comes slowly. Still, if we can observe a gradual reduction in size, and find the general health improving, we certainly can feel justified in continuing our medical treatment. I have so far found bacillinum 30, or higher, the most useful remedy.



RELAXING HYPERÆSTHETIC RHINITIS ACCOMPANYING PREGNANCY.

C. GURNEE FELLOWS, M. D.

Chicago.

IN 1898 Mrs. M. presented herself with the following symptoms: Frequent attacks of sneezing followed by copious flow of thin watery discharge, the nose being completely occluded and nasal breathing being impossible. These attacks occurred frequently during the day, and at night were aggravated rather than diminished. I had previously had this patient under my care for simple hyperplastic rhinitis, and knew that up to recently she had been in good nasal condition.

Examination revealed a mucous membrane of normal color, but all the turbinates so swollen that a complete intra-nasal view was impossible.

The application of cocain reduced the swelling and revealed fairly normal nasal chambers. Simple local treatment was advised, and arsen. iod. given internally. No improvement was noticed. Various solutions were advised, and naphthaline, allium cepa, nux, etc., were given as seemed indicated, but no improvement was obtained.

The condition was aggravated by stepping out of bed upon the cold floor, by dust, and change of air, but showed no amelioration, except when cocain was applied, which of course was not allowed for home use, and the patient was ignorant of what gave relief at the time of my examinations. Antipyrin and menthol solutions were more efficacious than the simple antiseptics. Repeated examinations did not reveal any new condition, but it seemed only as a completely relaxed condition of the turbinated bodies with symptoms of false hay fever.

After learning that the patient was five months pregnant, and

being under a great nervous strain, from having recently lost her first and only child, I was compelled to believe that it was a neurotic accompaniment of her pregnant state. I did what I could for her, and she accepted the inevitable, but recovered entirely and promptly at the delivery of a living child.

CASE II.—Mrs. H. presented in 1899 all the symptoms of the first case, and she too had been under my care for intra-nasal treatment, a partial stenosis having been removed. Relaxed turbinated bodies completely occluded the nares, and the spells of sneezing and watery flow were frequent and exasperating. Being on my guard, and finding no causative factor, I asked for and obtained information as to her being pregnant, and found her also to be in the fifth month of gestation. With my previous experience before me, I hesitated about promising much; but the extract of suprarenal gland was just coming up for notice, and I tried it, with happy results, in that it gave much of the relief that cocain promised, and was felt to be harmless. I entrusted her with the drug, instructed her how to make fresh solutions, and she used it several times a day, with the result that she was enabled to relieve her stenosis for some time after each application and to obtain a fair night's sleep. She used it before retiring and before rising, and at times during the night. Remedies were given, but I do not know what part they played in the relief.

CASE III.—Mrs. W. presented herself in February, 1901, with the same symptoms. She had been treated by her family physician for a cold for two weeks. Upon her becoming insistent that enough was not being done, she was treated by strong solution of nitrate of silver, and even cauterized with the pure drug. Aggravation followed, and I was consulted. I could find no pathological condition present. After the contraction of the turbinates following cocain or suprarenal solution, I gave it as my opinion that she was another case with some unknown cause, and asked if she was pregnant. She replied in the affirmative, but said there could be no connection between the two facts. My experience, and now hers of two months, has convinced her of the fact. Improved physical condition, fresh air, which she had avoided under the supposition that she had a cold, give her some relief, and adrenalin with chloretone used at intervals, together with remedies for her neurotic condition, are furnishing more or less amelioration.

Remarks.—I do not believe that such cases are suitable for harsh or radical treatment. I should avoid the use of the cautery or any operation. I believe it to be a nervous reflex of pregnancy. Soothing local means are alone advisable, and such remedies and adjuvant treatment as may be furnished by attention to the general condition are the safest things to advise. The two cases recovered completely without intra-nasal treatment, and they are quoted as a suggestion to those who may meet similar ones.

70 State Street.



ANOSMIA.*

DR. A. ONODI.

Budapesth.

THE peripheral nerve cells of the mucous membrane of the regio olfactoria are connected by means of the non-medullated nervi olfactorii with the bulbus olfactorius, which again is connected with the brain through the tractus olfactorius. The lateral root of the olfactory tract ends in the gyrus uncinatus, some fibers run to the temporal lobe ; the median root of the tract ends in the gyrus fornicatus, one bundle of the fibers passes to the commissura anterior, thence the greater portion of these fibers passes by the lower part of the lenticular nucleus, between putamen and globus pallidus, and is lost in the temporal lobe, while the smaller portion of these fibers runs in the region of the internal capsule and ends in the optic thalamus. The commissural fibers also contain crossed routes. The central terminations in the cortex are situated in the gyrus hippocampi, gyrus uncinatus, and the anterior end of the gyrus fornicatus. The centers for smell are connected through association fibers with the cortical centers of the trigeminus and glosso-pharyngeus. We have, unfortunately, very few clinical and pathologico-anatomical observations to support these histological facts. Most clinical and post-mortem observations are limited to the anterior cranial fossa, to lesions of the olfactory bulb and tract. Quite unique are

* Contribution to the Thirteenth International Medical Congress, Paris. Abstracted and reported by Dr. A. J. Hutchison for *The Journal of Laryngology, Rhinology, and Otology* of November, 1900.

those cases in which, anosmia having been present during life, pathological lesions have been found in the brain and cortex post-mortem. Further, the few anatomico-pathological facts have not revealed isolated foci, which would enable us to locate precisely a cerebral olfactory center. Examinations of cases of cerebral tabes have demonstrated atrophy of the roots of the olfactory bulb, of the olfactory nerves, and a loss of fibers in the anatomico-histological centers of smell. In cases of cerebellar as well as of cerebral tumors, atrophy of the olfactory nerves has been observed, and this has been regarded as a secondary change due either to increased intracranial pressure or to chronic inflammation of the pia. Loss of fibers has been noticed in the gyrus uncinatus and gyrus hippocampi in cases of paralysis progressiva. In a case of anosmia Schäffer and Frey found atrophy of the olfactory tract and a great loss of fibers in the gyrus uncinatus and cornu ammonis. In a case of kakosmia a tumor of the right gyrus hippocampi was found. In tumors of the gyrus uncinatus and the gyrus fornicatus hallucinations of smell have been noted; so also anosmia in cases of hæmorrhage, embolism, and lesions of the temporal lobe. In one case crossed anosmia was found along with aphasia and right hemiplegia. It is to be seen, then, that our knowledge of the nerves of smell, of the course of their fibers, and of their centers, has so far been but little increased by pathological observation. Nevertheless, the few facts thus obtained can be brought into harmony with those derived from comparative anatomy, and justify the conclusion that in man the center for smell is probably situated in the gyrus hippocampi and gyrus uncinatus. Clinical experience shows that lesions in the regions of the above-described nerve routes can cause disturbance or loss of smell, that a partial decussation of the nerves of smell takes place in the cerebrum, and that an association between the centers of smell and the cortical trigeminus centers is, at the least, possible.

Let us now examine the ætiology and attempt a classification of the different clinical forms of anosmia. As to the

ætiology of anosmia, cases can be so classified as to give us (1) One group in which either pathological changes in the region of the sense of smell or injurious influences are recorded; and (2) a second group in which changes cannot be discovered and are not to be expected, but in which the loss of smell is rather to be referred to mechanical interference with nasal respiration or to functional disturbances. We divide anosmias into the following classes: (1) Essential or true anosmia—this can be central or peripheral according to the part of the regio olfactoria that is affected; (2) mechanical or respiratory anosmia; (3) functional anosmia.

Amongst the ætiological causes of peripheral true anosmia are found inflammation of the peripheral regio olfactoria, leading to olfactory neuritis, also atrophy of the nerve of smell. Inflammation of the peripheral regio olfactoria can arise in connection with inflammation of the nasal mucous membrane as the result of influenza. It may be a temporary affair or may end in atrophy. Syphilitic processes, high-lying, latent, or recurring polypi, also chronic ethmoiditis, may produce pathological changes in the peripheral regio olfactoria. Again this region may be affected by the atrophy of ozæna, or by senile atrophy, though the latter is generally central in origin. As for central true anosmia, the causes may be cerebral tumors in the anterior cranial fossa, abscess, hydrocephalus, sclerosis, emboli or hæmorrhages, syringomyelia, cerebral tabes, paralysis progressiva, senile atrophy; further, lesions directly affecting the bulbus and tractus olfactorius, such as cerebrospinal meningitis, syphilitic and tubercular lesions, traumata causing stretching or tearing of the nerves, bulbs, or tracts. To this group also belong intoxications with tobacco, cocain, mercury, lead, morphia, atropin, sulphuric acid, also over-stimulation and exhaustion of the sense of smell. Irritating gases, cocain, and tobacco have a peripheral, as well as a central, action. In this group again are to be reckoned the toxic influences of influenza, blood-poisoning, and erysipelas, also congenital anosmia due to defects in, or

absence of, bulb, tract, or cortical olfactory centers, lastly pigmentary atrophy, which probably affects the ganglion cells.

Respiratory or mechanical anosmia is caused by anything that interferes with nasal respiration: congenital atresia of the nares, acquired narrowing and synechiæ of the nares, a well-marked asymmetry of the nasal skeleton, deflections of the septum, tumors of the nasal fossæ, especially polypi, inflammatory swellings, hypertrophy of the turbinal bodies, foreign bodies.

The common cause of functional anosmia is hysteria, but various reflexes from distant parts may produce it, *e. g.*, after ovariectomy, during menstruation, after cauterization of the inferior turbinals and extirpation of the Gasserian ganglion. In this group must be included intermittent anosmia, without evident cause. The anosmia accompanying psoriasis buccalis, and disappearing when the latter is cured, is also functional.

Hallucinations of smell, various parosmias, and kakosmias are frequent precursors of anosmia.

Our knowledge of anosmia is extremely meager, and can only be extended by exact clinical observation and pathological examination.

THE VALUE OF "PARACENTESIS." *

THOMAS M. STEWART, M. D.,

Cincinnati, O.

Professor of Ophthalmology, Pulte Medical College; Surgeon
to the Eye, Ear, and Throat Department, Cincinnati
Homœopathic Dispensary; Staff-Surgeon
of Bethesda Hospital,
Cincinnati.

THE operation of corneal paracentesis, or evacuating the aqueous humor from the anterior chamber of the eye, has a greater value than is usually attached to it. That it does reduce eye tension and is valuable in that regard no one denies, but that it has a value in iritis is not so clear. Neither is it usually plain—that slitting up a corneal ulcer, or especially an abscess of the cornea, has a value other than evacuating pus.

What then is the value of paracentesis in iritis, aside from reducing tension probably superinduced by atropin, and what is its value in corneal disease, other than evacuating pus or stimulating a sluggish ulcer to heal?

In iritis the results to be feared are:

First—The complete attachment of the pupillary margin to the lens capsule, thus stopping the flow of aqueous from the posterior to the anterior chamber through the pupil.

Second—An increase of tension of the eyeball. This tension is due to retention of fluids within the eyeball, a condition greatly interfering with its nutrition. Either or both may destroy the usefulness of an eye in a few hours.

The treatment of the iritis depends first upon the treat-

* Presented to the Miami Valley Medical Society, April 25, 1901.

ment of any attendant constitutional disease. Hot foot baths, cleansing of the alimentary tract, and stimulation of the hepatic function are of service in nearly all cases. The local treatment is protection of the eyes from light, atropin, dry heat, and paracentesis. One drop of a two per cent. solution of atropin is put into the eye just often enough to keep the pupil dilated; from three times to once a day, once every other day, or even less, but keep the pupil dilated.

If but one eye is affected watch the other eye, test the mobility of the pupil daily; if it is at all sluggish, or the eye becomes congested, use one drop daily of a 1:5000 atropin solution. This will lessen the need for atropin in the bad eye—an important point in aged people.

The keynote is keep the pupil dilated to the utmost. Now suppose one drop of a two per cent. solution used three times a day fails to keep the pupil dilated, then puncture the cornea and relieve the intra-ocular pressure. If necessary repeat this several times. Draining off the aqueous causes collapse of the cornea, which after a few minutes is restored by reaccumulation of the aqueous.

Adhesions of the iris to the lens capsule result in imperfect or irregular dilatation of the pupil. In this event use a two per cent. solution of cocain combined with two per cent. of atropin several times during the day. If the pupil fails to dilate, with or without increased tension or excessive pain, puncture the cornea. Follow with atropin. These procedures properly carried out should cause dilatation of the pupil and a breaking down of synechia. If puncture of the cornea with atropin fail in immediate results, an iridectomy is to be considered.

In abscess of the cornea, paracentesis is a conservative operation. It evacuates the pus which is between the corneal lamellæ, it anticipates the corneal perforation, and thereby lessens the danger of prolapse of iris and lens into the corneal opening. It will preserve the integrity of the eye when irremediable blindness by any other method is likely to follow. This we have seen demonstrated in more

than one case, when the local and internal treatment was all that could be desired.

Creeping ulcers may be checked by a timely paracentesis, often preventing the need of the actual cautery to limit the destruction of tissue.

This operation of paracentesis is not thus emphasized as taking priority of proper nursing, proper hygiene, and proper internal medication, but when our best efforts in all these directions are unattended with improvement we must not forget the valuable and conservative aid surgery offers.

704 Elm Street.

FOREIGN BODY IMBEDDED IN THE CORNEA FOR A YEAR.

JOSEPH IVIMEY DOWLING, M. D., O. ET A. CHIR.

Albany, N. Y.

INJURIES of the eye are frequent among masons, stone-cutters, and others where work necessitates the chipping of stone or metal ware, and while most of these are limited in nature, and leave little or no permanent injury, still any particles of a foreign nature that are imbedded either in the eye or upon the superficial parts are a constant menace, and should be removed as soon as practicable and in the most approved surgical method.

The eye has great power of recuperation after an injury, and all who have had an opportunity to observe the frequency of injuries occurring in mechanics have been able to observe this *vis medicatrix naturæ*, and wonder at it. It is a known fact that nature by suppuration, necrosis, and plastic exudates sometimes accomplishes what the surgeon effects with the knife and needle. It is for us to anticipate and render easy the recuperative part that nature has to perform after every medical or surgical procedure.

Even in so frequent an occurrence as corneal injury, time has improved the method of treatment, as is evidenced by the following excerpts taken from the 1855 edition of William Mackenzie's admirable treatise on "Diseases of the Eye":

"The eye should be fomented three or four times a day with warm water, and the eyelids painted over with extract of bella-

donna. This greatly relieves the intolerance of light attendant on every sort of abrasion or ulceration of the cornea. Bleeding with leeches *or from a vein of the arm* is highly beneficial, and must on no account be neglected when much irritation has been produced ; the patient should be purged, and should remain at rest without attempting to use the eyes till all danger of inflammation is past."

When a particle of iron is the offending body, this same work mentions, but only to condemn, that "Autenrieth, after the foreign body is removed, proposes to dissolve the remaining rust with diluted muriatic acid."

How different is the method of our period, for with the delicate spuds and gouges most of the foreign bodies can be removed, leaving a small healthy ulcer which in most cases heals rapidly, provided that true antiseptic methods have been followed.

In case the particle is iron or steel, the electro-magnet plays an important part, the smaller office instrument proving sufficient in many instances, and Haab's electro-magnet being the open sesame in the more obstinate cases.

The purpose of this article is to cite a case in which a piece of iron one-eighth of an inch in length remained imbedded in the cornea for nearly a year, after which time it was removed and all signs of irritation disappeared. The following is taken from my records :

February 21, 1900.—Mr. H., aged sixty-five, a stone-cutter, while cutting a piece of stone this morning, felt something fly into the eye, causing considerable pain. A fellow-workman saw a piece of steel "on the center of the sight," and tried ineffectually to get it out with a jack-knife. Examination showed a foreign body imbedded to one side of the center of the cornea, and by the aid of focal illumination it could be seen to be apparently projecting into the aqueous chamber. After trying unsuccessfully the electro-magnet, the gouge and spud were used ; but fearing to cause too great damage to the eye, it was deemed wiser to desist, as the body remained firm, and there seemed to be great danger of perforating the cornea.

The dangers were explained to the patient, and the following

suggestions made: first, that he should go to New York and have the Haab magnet used; or, have an iridectomy knife passed through the cornea and the endeavor made to press the the body forward from the aqueous chamber; or, finally, simply to watch the eye and use cold compresses and give the eyes complete rest.

He chose the last alternative, so aconite 2x, gr. j, was prescribed at hourly intervals, and cold compresses applied, with daily instillations of bichloride of mercury, 1:10,000. Within three days the irritation began to lessen, and by March 15, the foreign body was encysted. From that time to February 6, 1901, the eye remained in fair condition, the only sign of trouble being an occasional scratching on the upper lid, which gradually thickened. At this time (February 6, 1901) there were signs of ulceration about the foreign body, and although the electro-magnet failed, the use of the gouge was sufficient to remove the steel, for it so proved to be, as the magnet readily seized it when free.

Bichloride of mercury instillations and cold compresses with the internal use of silicea 3x, gr. ij, four times daily, readily removed all signs of irritation, and as a sequence the thickening of the lid has lessened.

This case is reported because of the length of time the foreign body remained imbedded in the cornea, and to show the tolerance occasionally exhibited even after the unskillful digging of a fellow-mechanic had been primarily sought. The opacity is somewhat dense, but sufficiently one-sided to allow good vision.

223 State Street.

SYMPOSIA.

Why Does the Image in the Affected Eye Seem to Stand Nearer to the Patient than the Other Image when Testing for Paralysis of the Superior Oblique, or Sometimes of the Inferior Rectus?

SWANZEY (7th ed. p. 514) says it does, without any explanation. Evidently one image was larger, hence appeared nearer; but why is it larger?

In a case of the Editor's at 6 meters (orthophoria), the left image seemed "nearer," and in accommodation it seemed "on both sides of the other." V. = o. d. $6/5$, o. s. $6/5-$. Hm. o. d. $+ 0.50 = 6/5$ blurred; o. s. $+ 0.75 = 6/6$, or $0.50 = 6/5-$.

SAYER HASBROUCK: On referring to the text of Mr. Swanzy, I see he says, "For which a good explanation does not exist." As Mr. Swanzy is a deep student of muscular anomalies, it is safe to say that no explanation thus far given is satisfactory to him, and I hesitate in advancing an explanation of my own, for fear it may not stand the test of those more familiar with optical phenomena.

As a starting point I will quote from Tscherning's "Physiologic Optics," page 312: "It is scarcely possible to suppose a serviceable binocular vision if the entire retina had an acuity like that of the fovea." The superiority of the fovea as to visual acuity is admitted by all, hence the image perceived by the fovea is clear and distinct. Now the image of the affected eye coming from a different location on the retina will be found to be slightly blurred.

This fact you can demonstrate for yourself: If you produce an artificial diplopia upon yourself by pressing one eye in or out, up or down, you will find that the so-called false image is blurred and apparently nearer to you than the real image.

Now if you will take a plus lens of three or four diopters, and

hold it before one of your eyes, thus blurring the image of that eye, even though it is perceived on the fovea, you will find that this blurred image is also nearer to you than the image of the other eye, and if you will move the lens from right to left, it will appear to float in the air in front of the image of the other eye.

If you will allow me another illustration to prove that it is the blurring that makes the false image appear nearer, we need only to recall to our minds the wonderful and almost startling effect that a fog has on the location of objects at sea. Passing vessels will seem almost upon you when first seen, but they pass you at a perfectly safe distance.

I would go farther than Mr. Swanzey, and say that this phenomenon will be found to exist in every paralysis of the ocular muscles with diplopia.

Mr. Editor, in a way your explanation as well is correct, as a blurred image always looks larger. The explanation of your own case in accommodation I think will be found under the head of "Physiologic Binocular Diplopia," as described by Alhazen, see Tscherning's "Physiologic Optics," page 307.

The Operative Treatment of Glaucoma. (Knapp's Arch. of Ophthal., January, 1900.)

DR. KERN (Ninth International Ophthalmological Congress, held at Utrecht, in August, 1899), believes that we are justified in operating on every case of glaucoma in which there is the slightest chance of success, because it is known that both acute and chronic glaucoma, without treatment, surely lead to blindness. By glaucoma the author understands an increase of tension in the posterior segment of the ball. If the iridectomy which is first made in every case of glaucoma does not have the desired result, the author proceeds as follows: A Graefe knife is entered through the cornea 2 mm. from its margin and in front of the coloboma, and the point passed above the lens back into the vitreous chamber and slightly turned before withdrawal, in order to secure as free a communication as possible between the vitreous chamber and the anterior chamber. In some cases the operation leads to cataract, and extraction is required later.

The author's statistics are as follows: In 34 per cent. of glaucoma cases, permanent recovery after iridectomy; in 20 per cent., improvement lasting one to three years; in 10 per cent.,

recovery after the author's "antero-posterior sclerotomy," in the remaining 36 per cent. a final blindness in spite of every possible method of treatment.

Iridectomy in Glaucoma Simplex.

TRUC and CHAUVIN give results obtained in fourteen cases of simple glaucoma which have been under observation for from six months to five years and a half after the iridectomy. They consider this operation and anterior sclerotomy only as worthy of retention, giving their preference in favor of iridectomy. They believe in an early operation, although the process may have been without pain and the vision good. Full recognition is given of the difficulty of making a diagnosis between a simple glaucoma and optic atrophy with excavation, when there is no rise in tension. If after use of myotics there is an increase in the vision and an enlargement of the field, benefit by making an iridectomy may be hoped for. Chronic glaucoma is so apt to be bilateral that the field of the apparently sound eye should always be examined, and if there is shown to exist a characteristic loss, an operation should be undertaken, even though the central vision should be perfect. Although this procedure is not infallible, it may be safely said that no other method promises so well.

THOS. M. STEWART : Iridectomy is of curative value in acute glaucoma, because the section of the iris includes the vaso-dilator nerves in the iris, and this stops the hyper-excitation of these vaso-dilating nerves. No cure of acute glaucoma results unless the medium portion of the iris is removed. This is why sclerotomy is not as effective as iridectomy.

In chronic glaucoma the tension develops slowly ; but here iridectomy does not produce the benefit that it does in the acute form, because in the acute form the vessels of the anterior segment of the eye, regulated by the iris plexus, are involved. In the chronic form dilatation of vessels occurs only in the choroidal network, the hypersecretion is less active, and hence the tension increases more slowly ; the vaso-dilator nerve filaments are not the same and do not terminate in the iris plexus, thus section of the iris plexus, as in iridectomy, does not benefit. At this point section of the cervical sympathetic comes into play.

SAYER HASBROUCK : I still have faith in iridectomy as the

best method of operative treatment in glaucoma. Whether this should be preceded a few days before by an anterior sclerotomy to reduce the tension, or by a posterior sclerotomy just previous to the operation, depends a great deal upon your patient. Few like to have two operations if one will answer, but there seems to be an increasing faith that either an anterior or a posterior sclerotomy adds much to the success of an operation.

I should much prefer that Dr. Kern should perform his "antero-posterior sclerotomy" than myself.

Of late I have begun to have a great deal of faith in massage in the treatment of chronic glaucoma, and believe it should be given a faithful trial before operative measures are attempted.

BUSHROD W. JAMES: I believe that the earlier an iridectomy is performed the better for each case, unless it is found that the tension is diminishing and the field of vision is at a standstill or slightly increasing in area. Dr. Kern's suggestion to operate on every case where there is the slightest chance of success is certainly an advisable method. In reference to the operation of "antero-posterior sclerotomy," in order to open up the vitreous humor freely and in order to make a free communication between its interior and the anterior chamber, I have to offer the following suggestion: that I not only approve of the operation, but that this operation of Dr. Kern be supplementary to every iridectomy performed for glaucoma, either acute or chronic, as an additional measure to insure success. In regard to the operation of iridectomy for glaucoma, I fully favor an iridectomy as the best procedure in all these cases, although some years ago I cured a number of cases by dividing the ciliary ligament, but as the operation did not become a standard one, and as there was more or less hazard from secondary results and panophthalmitis, I abandoned it and thought best to adopt the iridectomy only.

W. U. REYNOLDS: The pathology of glaucoma is a sclerotic process of the drainage system; the lymph spaces about the nerve are closed by a swelling or by a contraction of the connective tissue, which also contracts upon the blood vessels, and finally chokes the nerve tissue itself. Are we able to control this contraction in hepatic or renal or pulmonary or cerebral tissue?

We should endeavor to separate these cases into pathogenetic

classes, and individualize their treatment upon that basis. Should rheumatic, lithæmic, sclerotic, cirrhotic, and fibrinous, etc., cases all be treated alike, and operated without medication?

Enucleated glaucomatous eyes have shown their nerve shriveled to a thread. Is increased pressure in the eyeball the cause or effect of this condition? Is the receding of the disk center caused by pressure or by a contraction of the sustentacular tissue?

Serous and rheumatic inflammations elsewhere are controlled and cured without a sign of impaired function remaining.

Our school believes in cure by removing the systemic tendencies as well as by relief through expedients. Why then should not the different causes be met as elsewhere by a reasonable medical treatment.

Turbinectomy.

CHEVALIER JACKSON, in *The Laryngoscope*, December, 1900:

"Turbinectomy will frequently cure ailments remote from the nose that are *due to lithæmia*. Thus we all see an occasional case of asthma, vasomotor coryza, hay asthma, rheumatism, chronic gastric catarrh, and a host of other diseases whose predisposing factor is lithæmia, get well after turbinectomy."

The writer advises the removal of the turbinate to allow more perfect drainage, and says: "For the relief of nasal stenosis it is of little use to remove an anterior spur from the septum and leave the turbinate untouched, to re-form the spur by pressure and to intermittently occupy all the space gained by the removal of the spur."

THOS. M. STEWART: Turbinectomy? Yes, if there be hyperplastic inflammation. If soft hypertrophy, much can be done by an anti-lithæmic diet, combined with submucous scarification of the turbinated bodies.

SAYER HASBROUCK: In treating nasal obstructions I agree with Dr. Jackson that we need to do enough to get good drainage, but I think it is rarely necessary to perform turbinectomy after we have removed the spur from the septum.

There are cases of hard fibrous hypertrophies that suprarenal extract and cocain have little or no effect upon. These I believe need to be operated upon, but the others that contract readily

to suprarenal extract and cocain I find do very nicely after the application of protargol, twenty per cent. solution.

This may have to be repeated, but it causes no discomfort, and so far, in my hands, has proven very satisfactory.

C. GURNEE FELLOWS : I do not believe in the promiscuous removal of the turbinated body, even for a marked stenosis, but I do believe in clean operative methods, and am not averse to the use of any instrument that will accomplish the purpose. I think the spokeshave is an instrument mainly indicated for use in radical operations such as complete removal of the turbinated body. I have used it in a modified form for shaving off simple hypertrophies, and even septal spurs. Submucous cauterization is a simple, clean, and scientific method of reducing many of the soft hypertrophies, but for the tough, cicatricial, pendulous tumors, I like the snare and scissors. The wound is clean, healing without much scar tissue.

H. W. HOYT : I think that often asthma, coryza, hay fever, and cough are caused by the mechanical irritation of a nasal growth, and its removal cures the case, but not on the theory of lithæmia.

Turbinectomy is in many instance too radical when the removal of a small portion of the turbinate will answer every purpose.

Cautery vs. Knife for Lymphoid Hypertrophies.

GUSTAVE A. MUELLER (*The Hom. Eye, Ear and Throat Jour.*) says, when considering Hypertrophy of the Faucial Tonsil :

"In the spongy variety many employ the cautery, but my experience with the cautery has been so unsatisfactory in many cases, and has changed the soft, spongy variety into an hypertrophy of a more fibrous nature, has been the cause of so many inflammatory conditions, has brought about so many adhesions to the faucial pillars, has caused so much inconvenience and pain to the patient, that I have been led to discard this method almost entirely, and my subsequent experience has impressed me most forcibly with the superiority of the knife."

THOS. M. STEWART : The knife, for the reasons stated by Dr. Müller.

SAYER HASBROUCK : I am heartily in accord with Dr. Müller.

C. GURNEE FELLOWS : I believe that the cautery is occasionally indicated in the treatment of the faucial tonsil, and particularly if the tonsil itself is not large, but the crypts are always filled with a cheesy exudation. Under these circumstances a red hot cautery knife, bent at a right angle, pushed well into each crypt, two or three at a sitting and a few days apart, will produce good drainage, and will be followed by an improved state of health. But when the tonsil is hypertrophied and needs removal, I believe it is best done by means of a guillotine in children and by scissors and punch forceps in adults, or by the occasional use of the galvano-cautery snare after freeing the tonsils from the pillars by means of a specially prepared knife, so that the wire will be pushed well down toward the base of the tonsil.

When should the Galvano-Cautery be used in the Nose?

H. BEAMAN DOUGLASS writes in *The Post-Graduate* :

“The introduction of electricity into the work of the rhinologist developed the use of the electro-cautery and the electro-trephine. For a time ordinary surgical methods fell into disfavor and disuse, while the cautery became the cure-all to accomplish the reduction of the various forms of nasal lesions which the specialist met. This method seemed so simple, the operation so bloodless, and the results, at least temporarily, so beneficial that the cautery heated by the electric current became a method of cure for nasal pathological conditions, and was in the office of every practitioner. Gradually the bad results began to show themselves, and in the hands of the specialist the cautery has especially fallen into disfavor.

“The cautery is more difficult to control than cutting, because of certain localities where it cannot be used without danger of complications ; it is also more dangerous. On the other hand, it is a powerful remedy for good in selected cases. What, then, are the conditions in which it may be used with success in the hands of a careful operator ? ”

THOS. M. STEWART : In the vascular tumors, cancerous growths, and hypertrophies of the lingual tonsil.

A Plea for Early Naked-eye Diagnosis, and Removal of Entire Organ, with Neighboring Area of Possible Lymphatic Infection, in Cancer of the Larynx.

At the 22d Annual Congress of American Laryngological Association, JOHN N. MCKENZIE, in opening the discussion on "Cancer of the Larynx," made a strong argument for the "naked-eye" diagnosis of cancer, even advising the following:

"But suppose, after weighing carefully all the facts of the case in our possession, a reasonable doubt remains as to the diagnosis, shall the next step be the removal of a portion of the diseased structure for examination?"

"In the face of all authority to the contrary, I say emphatically, 'No.' Before even considering such a proposition (if it be considered at all), the suspected growth should be examined from every point of view, for in this manner alone can we give the naked-eye method its full measure of usefulness. This is best accomplished by the second method, thyrotomy, or, if necessary, even more extensive external division of the tissues of the neck.

"Thyrotomy is (always) justifiable in such cases, when laryngoscopic examination either leaves a reasonable doubt as to its true nature, or manifestly fails to define the exact territory occupied by the disease."

THOS. M. STEWART: Our experience is such that early operation is to be more favorably considered, because later developments in the cases we have had have rendered successful operation out of the question.

SOCIETIES.

Abstracts, with discussions, of the more interesting papers presented at recent meetings.

In the transaction of societies which we publish mention will be made of the name of the periodical, when ascertainable, in which articles will be published in extenso.

NEW YORK COUNTY HOMŒOPATHIC MEDICAL SOCIETY,
APRIL 11, 1901.

Bureau of Eye and Ear.—A demonstration of Mr. Hutchison's Aukophone and Aukolalion upon the deaf and deaf-mutes, as

also on aural massage, interested the society for an hour. The aukophone magnifies sound more than any instrument in present use. With the aukolalion a deaf-mute is made to hear the voice, their own as well. In teaching deaf-mutes to talk it is indispensable.

A. W. P.

MONROE COUNTY HOMŒOPATHIC MEDICAL SOCIETY, APRIL, 1901.

Otitis Media Suppurativa Acuta, by Thos. Parsons.

The writer thinks that every physician ought to prepare himself to recognize a plainly diseased ear, and should carry a head mirror and speculum. He ought to examine ear in children if case is obscure; even if no pain is complained of. Use dry heat, bell., or ferr. phos. in acute cases and early incision of M. T. if bulging or pressure. Keep clean and dry. He warned his hearers against H_2O_2 and boric acid. H_2O_2 tends to soften tissue too much; later, hepar, kali bi., merc. cor., to clear up secretion.

Discussion.

Dr. Bissell thinks it often difficult to diagnose by appearance of M. T.; it needs a trained eye in many cases. He questioned the advisability of the general practitioner incising the M. T. But possibly there might be less harm from a bungling operation than from neglect. Sometimes the ice bag in very early stage is better than heat; the Politzer bag is dangerous unless the opening is very large in M. T. Dr. Neefus warned against great danger of facial paralysis and brain complication in neglected cases.

The Accessory Nasal Sinuses, by H. W. Hoyt,

Was a brief review of anatomy, ætiology, and symptoms. Pulsatilla θ and arnica are the chief remedies in acute cases.

Remedies not curative in chronic. Heat, either externally or through the nose, by hot pneumo-massage with medicated vapor is very soothing to intense pain. Secure free openings to sinuses in acute cases by supra-renal extract, or adrenalin, or cocain, but these are to be used only by the physician. Keep nostrils sprayed clean. In chronic cases open sinuses freely. All can be reached by local anæsthesia through nose or mouth, though the frontal sinus is more satisfactorily operated on by an external incision. Thorough curettement is the only sure cure of chronic sinusitis. Constitutional treatment is important to overbalance the drain on the system.

HOMŒOPATHIC MEDICAL SOCIETY WESTERN MASSACHUSETTS,
MARCH 20, 1901.

Inflammation of the Mastoid, by Wm. G. Walkley, Pittsfield, Mass.

A concise consideration of the disease is followed by this interesting case. Eunice P., æt. five years, was found January 11 with temperature of 106°, pulse 160. History of nasal catarrh and hypertrophied tonsils. Scarlet fever rash well developed, greatly swollen tonsils and throat covered with dirty gray patches, tongue heavily furred. January 14, a slight otalgia, which was relieved by bell. 9, gtt. ij, locally, with steam. The next day otorrhœa commenced, and on the 16th a scarlatinal arthritis supervened, attacking feet, knees, elbows, and hands. Case progressed slowly, receiving for the otorrhœa, puls. 3x, followed by hepar s. 2x until February 13, when rectal temperature arose to 100.2° F., and the mastoid became red and swollen; child bright, complaining of *no* pain. Next day auricle pushed forward, mastoid skin red, angry, and œdematous, tenderness on pressure, but no other pain or fluctuation; torticollis present. Aural examination revealed bulging of superio-posterior wall. Upon consultation with Drs. H. A. and W. F. Noyes it was decided to deplete the tissues by incision through drumhead from short process of malleolus upward and outward to periphery and along the superio-posterior wall of external auditory canal for short distance; bleeding was allowed for a few minutes, when antiseptic dressing was applied and ice bag for twenty-four hours; internally hepar. s. 2x. Almost immediately the temperature fell to normal, tumefaction and pain disappeared. For following four days ice bag was used about half the daytime, ear irrigated with pyrozone and bichloride twice daily, and patient directed to lie on the affected side occasionally to promote drainage. On the sixth day, however, renewed swelling and redness denoted relighting of inflammatory process within. To abort the case now seemed hopeless, therefore heat was substituted instead of cold, "to be continued twelve hours, when if no improvement was noted it was determined to perform the radical operation." Improvement immediately set in, and continued gradually; irrigations of pyrozone and boric acid still employed. She has hepar. s. 2x and sil. 3x; and probably calc. fluor. will complete the cure.

MEDICAL SOCIETY OF THE MISSOURI VALLEY, SEMI-ANNUAL
MEETING, MARCH 22, 1901, OMAHA, NEB.

D. C. BRYANT, in a paper entitled "The Pathological Importance of the Accessory Sinuses of the Nose," called attention to the necessity of more careful diagnosis where the slightest sign of pus was to be noted in the nasal cavity, making note of diagnostic points of pus in the superior meatus or running down over the middle turbinate, indicating sphenoid or posterior ethmoid cells. Where the condition is in the antrum, frontal sinus, or anterior ethmoid cells, pus is more apt to be in the middle meatus.

He lays stress on the careful use of probe, trocar, canula, and syringe for diagnosis, and uses exploratory puncture through wall of inferior meatus for antrum diagnosis.

H. GIFFORD of Omaha recited a case of methyl alcohol poisoning, with complete recovery of vision in three months, though disk is still pale. Treatment was salicylate of soda. The patient had taken what was purchased for "cologne spirit," but proved to be wood alcohol.

WILLS' HOSPITAL OPHTHALMIC SOCIETY, PHILADELPHIA,
MARCH 11, 1901.

F. FISHER presented a case of *sympathetic ophthalmitis* coming on after a panophthalmitis which had followed a cataract extraction in a patient aged sixty-four. He laid especial stress on the age at which the ophthalmitis had developed, and the long period of time elapsing between the condition and the cataract extraction.

W. Zentmayer asked if this disease is not rare after panophthalmitis. In answer to a question, Dr. Fisher stated that when he saw the case the fundus had become invisible. Dr. Risley asked whether subconjunctival injections of solutions of chloride of sodium had ever been tried by any of the members of the staff. W. L. Pyle believed that the occurrence of sympathetic inflammation after panophthalmitis depended upon the amount of destruction of the globe; that if there was decided scleral rupture and escape of most of intraocular contents it was not likely to follow. C. A. Oliver had found that all attempts to do useful iridectomy in such cases were futile; the iris tissue is fri-

able, and any good results obtained are rapidly lost. He had been successful in several instances by either the Critchett-Story operation or Tyrrell's method of drilling. Had never employed subconjunctival injections to any advantage, nor as yet had made use of large doses of the alkalies, but thought if lymph formation and circulation are good, the former method might be of assistance.

G. C. HARLAN presented a case of *false maculæ*. A white man, aged twenty-three, negative family and personal histories, had squinted since childhood; could use either eye. February 23, 1900, admitted to the hospital with esotropia 40° , preferably fixing with the left eye. A tenotomy of the right internal rectus muscle, with an advancement of the corresponding external rectus, was done, leaving a residual squint of about 10° . Two weeks later similar operations were performed on the left eye, with the resulting in overcorrection 10° . January 23, 1901, perimeter showed 10° of esotropia. Maddox rod gave 20° of crossed diplopia. At this time a tenotomy of the right external rectus was done, allowing both eyes to fix centrally, but the crossed diplopia remained the same. One week later it was found that the esotropia of 10° still persisted. There was not any monocular polyopia. During fixation with both eyes a crossed diplopia of between 8° and 16° , with a hypophoria of $\frac{1}{2}^{\circ}$ to 2° , could be determined.

DR. ZENTMAYER presented a case of *divergent squint, with homonymous diplopia*, occurring in a bright student. Dr. Risley stated that it was not infrequent to find diplopia after correction of a divergent squint. He reported a case of cataract extraction on an amblyopic convergent eye, in which, after the operation, $V. = \frac{6}{12}$. A later operation upon the fellow (previously fixing) eye, in which vision was brought more nearly to normal, resulted in the patient afterward having diplopia. Dr. Fisher reported a patient with marked divergence who could at will associate the images of the two eyes and dislodge them to his greater comfort. Dr. Oliver gave the details of a case of marked esotropia in early life, with want of binocular fusion, that, through operative interference and want of proper correcting lenses, was changed in early adult life into a case of pronounced though comfortable divergence, with good vision in each eye. Recently, for cosmetic purposes, a colleague had so successfully

attempted to bring about a parallelism in the two organs that a most troublesome series of diplopias took place, necessitating an operation to restore the originally induced condition of comfortable divergence. Dr. Berens mentioned neuromuscular memory as one of the factors in this type of cases, and desired to see made careful studies from the standpoint of the psychologist.

DR. BERENS presented a case of extraction with the magnet of a *chip of steel* from the vitreous of a man aged thirty-eight an hour after the accident. Twelve days later, V. = $\frac{6}{9}$, and the eye was quiet.

DR. OLIVER exhibited a case of *double coloboma* of the iris, choroid, and optic nerve (downward and outward), with unusually small corneæ, in an Italian girl, aged sixteen. No history of inheritance, nor any other signs of congenital malformation. The surfaces of the fundus colobomata, which were on a much deeper level than the rest of the eyegrounds, were quite ectatic in places. Both optic nerve heads were considerably enlarged. The retinæ in the colobomatous areas were visible as thin, almost transparent, membranes, over and in which a few small vessels could be traced. Refraction in the uninvolved macular regions was myopic and slightly astigmatic. Corrected vision equaled about two-thirds of normal.

The case was particularly interesting because, in spite of the apparent microphthalmus, the eyeballs were enormously lengthened in their antero-posterior diameters, giving high degrees of myopic refraction.

DR. OLIVER also showed a patient from whom a *chip of iron* had been *spontaneously extruded* from the eyeball two years after the entrance into the crystalline lens through the cornea and the iris. No reaction followed the expulsion of the foreign body. The lens itself had been studded with brilliant cholesterine crystals for more than a year.

DR. BERENS presented a case showing the recent effects of a plastic operation for *symblepharon*, in which the conjunctiva of the upper lid had been adherent to the cornea over more than two-thirds of the surface, entire freedom of motion being restored to the globe.

DR. OLIVER gave a brief account of a case of *interstitial keratitis* occurring in the left eye of a twenty-four-year-old man suf-

fering from other stigmata of hereditary syphilis. He had treated and cured the patient's right eye for a similar attack of keratitis some six months previously. The point of interest in the case consisted in the fact that at the time of the patient's second admission to the hospital, some three weeks previously, the senior resident surgeon, Dr. Van Epps, discovered a sloughing chancroid involving almost the entire foreskin of the patient's penis, necessitating excision of the sloughing part of the organ.

ABSTRACTS FROM CURRENT LITERATURE.

The Normal Declinations of the Retinal Meridians.—George T. Stevens.—*N. Y. Med. Jour.*, February 16 and 23, 1901 (With Description of the Clinoscope).

A valuable paper to which full justice cannot be done in an abstract. By this title he means a deviation of any given meridian of the eye from the corresponding meridian in external space, the head being in the primary position; it is a passive state, not to be confounded with torsion, which is an active adjustment—a rotation of the meridians when the eye is moved to some other from the primary position. Declination is positive (+) when the top of the vertical meridian inclines toward the temple, and negative (—) if toward the nose. Normal or anomalous declinations are “extremely common”; it is too early to state the precise physical conditions on which they depend—often they are doubtless dependent upon the conformation of the orbit or upon the automatic tension of one or more of the extrinsic ocular muscles, or even upon the physical condition of the individual. It may amount to as much as 10° ; very high degrees are more frequently manifest after the age of fifty years.

The different forms of heterophoria are associated with different forms of declination, and experience has shown that in a large proportion of cases relief of the declination is followed at once by a relief to the heterophoria. The clinoscope has thrown a remarkable light upon many perplexing cases of heterophoria and heterotropia.

“In the rotation of the eyes upon their long axes, in the effort to effect parallelism of the vertical meridians, each eye is forced downward and outward.” [?] “The downward movements, if they are equal, have little influence in inducing heterophoria, but when the declination to be effected is considerable, the effect upon the outward swing of the eyes may be very considerable. As each line of regard is forced outward their parallelism is sacrificed to that of the vertical meridians, and exophoria results.”

It will be seen also that, if the leanings of the meridians are each positive but unequal, one eye would be forced outward and downward more than the other, and hyperphoria would result. These theoretical views of the adjustments correspond exactly with the results of practical experience when the phorometer and the clinoscope are used together.

When operating for exophoria by slight tenotomies before the use of the clinoscope, I observed that, as a rule, the tendon of the externus was rarely, if ever, found tense. It was hard to believe that the exophoria could be the result of the predominance of force of this muscle, which was so often found much relaxed. Later, when the tropometer was brought to the attempted solution of these questions, it was found that there was, in most cases, no excess of rotating power in the externi or any deficiency of rotating ability in the interni. It was noticeable also that it was no uncommon thing that what was apparently a successful correction of the exophoria was only a temporary one, and that the defect was apt to return in a few weeks or even after a few days in almost as high degree as before the operation. It was in many cases deemed better to leave uncorrected a marked degree of exophoria than to reduce the rotating ability of the externi, either by tenotomy or by a contraction of the interni, to an extent sufficient to permanently abolish the exophoria. With the advent of the clinoscope much light was thrown upon this whole subject. With a knowledge of the declinations and their effects we may now look for a relief from exophoria without restricting the action of any muscle and with a reasonable expectation of permanency of result.

He relates a case of long standing vertical diplopia that seemed pre-eminently to indicate tenotomy of the right superior rectus. “Yet, as there was + declination 6° of the left eye and

only $+ 1^{\circ}$ of the right, I determined to do an operation on the *internus* of the left eye with only the declination in view, for there was no marked exophoria or esophoria. The operation was successful in correcting the declination to within 2° , and on the following day I had the satisfaction of finding that there was easy single vision with less than 2° hyperphoria and with no esophoria or exophoria. Although many weeks have passed since this operation, the hypertropia has not again manifested itself."

In certain unusual cases it will be found that each eye will rise many degrees when a screen is placed before it ; even when any excess of upward rotation has been corrected the phenomenon remains. Here the upward turning is due to the declination of the opposite eye, and it will remain even after the eyes are both too low, unless the declination is corrected.

Excessive (homonymous) declinations combine their influence with excessive vertical (upward) rotations to induce convergent strabismus ; this has become a demonstrated proposition.

We have thus for the first time a logical and a uniformly applicable explanation for all the various forms of so-called concomitant strabismus. With a good understanding of the principles of rotation and of declination, there is no longer a necessity for a new theory for each form of strabismus. A considerable number of the symptoms which appeared to result from heterophoria can now be directly associated with the definite disturbing cause, declination, as it was not possible to do before.

Chronic palpebral hyperæmia is in most cases due to pressure by the lids in the effort to hold the eyeball steady and to resist the tendency to roll incident to the inclination of the meridians. The hyperæmia disappears without direct treatment when the declination is corrected.

Another symptom, less local, is the habitual pain in and over the brow of one eye or both eyes. If the brows are carefully observed, one or both are seen to be strongly arched, or one brow is flattened against the eye while the other is arched—may be with folds in the skin showing the tension of muscles beneath.

When the declination is relieved the brows at once assume a gentle curve and the pain vanishes in a day.

"Pathological declinations"—which are the result of a paralysis, paresis, or insufficiency of any muscle or set of muscles, or some disease or injury—are rare.

There are three characteristic facial expressions : (1) If both brows slant or arch upward toward the median plane we may look for positive declinations in both eyes and of nearly the same extent. Exophoria may be present. (2) Each brow ascends up and out from the nose—"the bird's wing" eyebrows. Here the declination is positive in each eye, but the degree differs materially in the two eyes. Such positive declinations may, if quite moderate in one eye and more decided in the other, give rise to esophoria ; but the nearer the declinations agree in the two eyes the greater is the probability of exophoria resulting. (3) Only one brow extends upward and outward ; or, a common modification, both brows curve strongly, but one is drawn much further upward than the other. In this class there is homonymous declination, + at the side of the compressed brow, and the negative on the side in which the brow rises toward the temple.

Unfavorable inclinations of the meridians might cause disturbances of function and of nutrition : amblyopia, vertigo, epilepsy, etc. When there is a + declination in each eye the head is, in many cases, thrown backward.

No practical systematic treatment with lenses can be used, but declination of the images (not of the eyes) is easily induced by a bad adjustment of strong lenses. Practically, the declinations can be corrected only by surgery. Only a bold and imprudent surgeon would undertake directly to change the action of the oblique muscles.

If with declinations there is anaphoria, that is, if the eyes point too high, quite important modifications of the declination can be accomplished while depressing the plane of vision. Experience has shown that it is prudent not to attempt to bring about such a relaxation of the superior rectus tendon as to induce, after the tenotomy on the first eye, as much as 10° (prism) hypertropia. A relaxation of 6° (prism), or possibly a little more, is within the limit of safety.

In a case supposed, we may relax the superior rectus of the left eye, *releasing the attachments of the tendon at its inner border only*, leaving the external border to a considerable extent intact. This depresses the eye somewhat and tilts it toward the center. When the negative declination is but slight it sometimes disappears after the partial or complete correction of the larger positive declination, a fact which suggests that the lesser negative

anomaly may in some cases arise from a synergetic tension of the muscles in association with those of the other eye, and it also indicates the propriety of attending first to the side which has the greater degree of the defect, which is almost invariably the positive.

With katatropia the inferior tendons may be treated on the same principle. Of all the recti muscles the inferior are the most subject to unpleasant disturbances from surgical interference. Better not touch them unless the upward rotation is markedly below the standard, and then a relaxation of from 3° to 5° is all that is usually safe. As a rule direct operations for esophoria and exophoria should be avoided. The writer describes at length his favorite operation, "extendo-contraction," which cannot with justice be condensed. J. L. M.

Spontaneous Perforation of the Eye, with Diffuse Choroidal Hæmorrhage.—*Tissitzin, Ophthalm. Klinik*, January 5, 1901, citing *Westnik. Opth.*

Female, aged sixty-five, suffered with acute glaucoma of left eye, which resulted in loss of vision. One night patient had sensation as if she had been hit on the side of the head, which was followed by hæmorrhage from the eye. The next day conjunctival sac was full of blood clots and in the lower part of the corneal border a wound $4/5$ cm. long was found, out of which a blood clot projected, which was removed with scissors. The eye healed without further hæmorrhage.

A peculiar feature was that the patient had no pain whatever the three days previous to the hæmorrhage, the eye being simply cloudy, with some lachrymation. C. G.

Tincture of Iodine for Corneal Ulcers.—*Journ. Am. Med. Sc.*, April, 1901, abstracting *Am. Jour. of Ophth.*, July, 1900.

H. Friedenwald has employed this treatment in twenty-five cases of dendritic keratitis and marginal ulcer of the cornea, without failure to bring relief and without untoward symptoms. He makes the application in the following manner :

A bit of absorbent cotton is wrapped firmly about a fine wood toothpick, so as to form a narrow, firm swab. This is dipped into the tincture of iodine, and the excess allowed to drop off. The eye having been prepared by instilling cocain and a drop of

fluorescin, the ulcerated area is thoroughly scrubbed until a distinct brown discoloration of the tissues is seen. The neighboring epithelium is very much loosened and curls up in all directions. It is important to touch this, and especially the minute infiltrations seen a millimeter or two away from the main line of ulceration, for usually these infiltrations precede the furrowed ulceration. The only error which is likely to be made is to apply the iodine too cautiously. He has never seen any ill effect from its being used too freely. Since he has become bolder in using it, it is rare that a second application is needed.

The application is usually followed by some pain, lasting for a few hours. The eye is bandaged, and an ointment of boric acid, iodol, or the like is applied. The bandage can usually be dispensed with after a day or two, though it may be well to use the ointment a few days longer.

Mouth-breathing and its Relation to Diseases of the Throat, Ear, Nose, and Accessory Cavities.—Mayo Collier.—*Jour. Lar., Rhin., and Otol.*, January, 1901.

Mouth-breathing is equivalent to nasal obstruction. The nose "is the great laboratory for the preparation of the food for the lungs, in the same way that the mouth is the laboratory for the preparation of the food for the stomach. A nasal respiratory tract not capable of supplying air to the lungs day and night at the normal rate of respiration, and without the consciousness of the individual, is an abnormal and obstructed nasal respiratory tract. Mouth-breathing, if persisted in, even in the hypothetical condition of a healthy patient's nose, would ultimately induce anterior nasal obstruction from atrophy, following disuse of the nasal valve (*ala nasi*). This would be followed by swelling of the lining membrane of the nose and accessory cavities from vascular dilatation; and this, again, would lessen the capacity of the nasal respiratory tract, and tend to set up nasal obstruction. A vicious cycle is set up. Mouth-breathing tends to obstruction of the nose, and this very obstruction maintains and continues the mouth-breathing."

It is well to remember that air enters the nose about twenty thousand times per diem—about two quarts of water is absorbed by the inspired air from the nasal mucosa each day, and the temperature of the air is raised to nearly that of the body.

Swelling of the mucous membrane extends also to nasopharynx, eustachian tube, and middle ear.

Not only the dried air in mouth-breathing causes inspissation of mucus in the larynx and trachea, but the post-nasal dropping from the nasal vascular dilatation irritates the upper inspiratory tract, as well as the œsophagus and stomach, causing flatulent dyspepsia. Considerable importance is given to its effect in chronic deafness. (We are unable to give a proper conception of this long scientific article on this apparently over-thrashed subject.—Ed.)

A. W. P.

Importance of the Superior Pole of the Tonsil and the Supra-tonsillar Fossa in the Genesis of Suppurative Peri-tonsillitis; Prophylactic Extirpation of this Pole.—Richard Botey.—*Ann. des Mal. de l'Orielle*, November, 1900.

A clear and full description of the close anatomical relation of the upper portion of the amygdala with the upper parts of the anterior and posterior pillar of the fauces and the plica triangularis. Retention of secretion in the tonsillar crypts by adhesion of tonsils to these structures is the usual cause of peri-tonsillitis.

He calls attention to the fact that this portion of the amygdala, because hidden by the anterior pillar, is usually unrecognized by most practitioners, and therefore is seldom if ever removed when performing amygdalotomy.

The not infrequent failure to cure conditions consequent upon hypertrophied tonsils by tonsillotomy, as usually performed, is due to the fact that this superior pole is untouched in operating. He makes a strong plea for the profession to more thoroughly explore this region, and concludes with an instructive and minute description of his method of dissecting the tonsil out with an electro-cautery knife while holding it out toward the median line of throat with forceps. He is more particular in extirpating the upper than the lower portion of the gland.

A. W. P.

Non-operative Cases of Acute Inflammation of the Mastoid Cells.—Gorham Bacon.—*Archives of Otolology*, February, 1901.

Our author holds that a great many cases of mastoid can be cut short in the first stage if, instead of giving opiates, phenacetine or quinine, leeching is resorted to at once—just in front

of the tragus for otitis media, but behind the auricle, over the antrum, on the lower portion of the mastoid if there be mastoid tenderness. The artificial leech is preferable; almost fatal hæmorrhage has followed the natural leech. He recommends drop doses of aconite tincture and six doses, one hour apart, of 1/10th grain tablets of calomel for laxative effect. [We predict he will be pleased with the internal administration of capsicum when the mastoid cells are inflamed.] The artificial leech is followed by the application for not longer than forty-eight hours of cold by means of Leiter's coil. Incise the drumhead posteriorly as soon as it bulges. Incise freely without waiting for bulging in infectious cases, especially if there be acute mastoiditis and considerable fever. A free discharge is essential: enlarge the spontaneous opening, and douche frequently with warm solution of boric acid or 1:3000 bichloride. Since adopting this treatment, eleven years, the doctor has had fewer operations than before. If, after incision of the M. T., application of the coil, and appearance of a profuse discharge the temperature remains high and the mastoid is still tender, an immediate operation will probably be necessary.

Extension to the dura or the sigmoid sinus is more probable in children and if streptococcus or pneumococcus is found in the discharge; the temperature is 104° to 105°, pulse rapid, but little pain, the patient is stupid or semi-dazed. If pneumococci are present don't fail to examine the lungs thoroughly—a central pneumonia may be keeping the temperature up. This conservative treatment should never be carried out except by an experienced aurist who can recognize very early the indications for opening the mastoid; the aural surgeon should be in close touch and prepared to operate at a moment's notice. Dr. Bacon advocates cold by the Leiter coil in the first stage of acute mastoiditis, but "after pus is formed it is dangerous and should never be used."

J. L. M.

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BOOK REVIEWS.

A DICTIONARY OF DOMESTIC MEDICINE, GIVING A DESCRIPTION OF DISEASES, DIRECTIONS FOR THEIR GENERAL MANAGEMENT AND HOMŒOPATHIC TREATMENT, with a Special Section on DISEASES OF INFANTS. By JOHN H. CLARKE, M. D., Fellow of the British Homœopathic Society ; Ext. Mem. Roy. Med. Soc., Edin., Consulting Physician to the London Homœopathic Hospital ; Editor of the *Homœopathic World* ; Author of "The Prescriber." American Edition, Revised and Enlarged by the Author. Philadelphia : Boericke & Tafel, 1901. Pp. 363. Price, cloth, \$1.25 net ; by mail, \$1.35.

A good book of its kind, but susceptible of improvement. Disinfection is ignored or alluded to in a casual manner, as if the reader knew what to use and how to use it. Erysipelas is not called contagious or infectious. Diphtheria is only called infectious, and "the contagious principle is contained in the breath." Nothing is said about the contagiousness of ophthalmia. Of all the contagious and infectious diseases directions for disinfection are given only in scarlatina. On the other hand more cautions, *e. g.*, danger of cerebral abscess from otorrhœa, are given than in most books of domestic practice. J. L. M.

THE INTERNATIONAL MEDICAL ANNUAL ; A YEAR BOOK OF TREATMENT AND PRACTITIONER'S INDEX. 1901. Nineteenth Year. New York : E. B. Treat & Co., 241-243 West 23d Street ; Chicago : 199 Clark Street. Price \$3.00.

For the thirteenth time we are glad to receive this yearly *multum-in-parvum* of 680 pages. If space should permit the copying of the thirty-four well-known contributors to this volume, such would be sufficient recommendation alone. There are between 140 and 150 pages devoted to subjects relating directly to eye, ear, nose, and throat diseases, beside the general subjects which affect our specialties, as well as the rest of the organism, *e. g.*, rheumatism, tuberculosis, syphilis, etc. This

does not include space, in the chapter of "New Remedies," given to drugs particularly interesting to us as specialists.

As of late we specialists are recognizing more and more the interdependence of the different diseases of the organism, we need to keep up with the progress of medicine relating to the general system. I know not of a volume where it can be found more condensed or conveniently arranged than the one under consideration.

A. W. P.

A TREATISE ON DISEASES OF THE NOSE AND THROAT. By ERNEST L. SHURLY, M. D., Vice President and Professor of Laryngology and Clinical Medicine, Detroit College of Medicine; Laryngologist and Late Chief of Staff, Harper Hospital; Consulting Laryngologist and Chief of Laryngological Clinic of St. Mary's Hospital; Consulting Laryngologist to the Woman's Hospital and Foundlings' Home; Member of the American Laryngological Association, of the American Climatological Association, of the American Medical Association, of the Michigan State Medical Society, etc. Illustrated. Cloth, \$5.00; sheep, \$6.00. New York: D. Appleton & Company, 1900.

A very thorough, well-compiled treatise on the subjects contained is this book of 750 pages.

The author has departed from the usual custom of chaptering each subject in strict accordance with anatomical position and has substituted pathology instead. *E. g.*, Chap. III. includes Acute Rhinitis, Pharyngitis, and Laryngitis, and Chap. X. Syphilis of Nose, Larynx, and Pharynx, etc. This brings similar conditions or mental pictures before the mind at one time, thereby making memorization the easier.

The thoroughness is shown by consideration of such rare conditions as Sialorrhœa and Xerostomia.

The paragraphs devoted to the Paralysis of the Larynx and Pandemic Influenza, or the Grip, we found very interesting indeed, although we could not agree with them implicitly.

The principal commendable feature is the large number of illustrations, 223 in all. Among these are thirteen of intubation, giving the best idea of this procedure I have seen except practice on the cadaver.

Beside these are six colored plates containing 34 figures from Grünwald, Turck, Schnitzler, Siegel, and Wright, which for coloring have few superiors.

A. W. P.

DISEASES OF THE THROAT, NOSE, AND EAR. A Clinical Manual for Students and Practitioners. By P. McBRIDE, M. D., F. R. C. P. Ed., Fellow of the Royal Society of Edinburgh; Surgeon to the Ear and Throat Department of the Royal Infirmary; Lecturer on the Diseases of the Throat and Ear in the University and in the School of Medicine of the Royal Colleges, Edinburgh. Third Edition, Revised and Partly Rewritten. With Colored Illustrations from Original Drawings. Edinburgh and London, Young J. Pentland; Philadelphia, P. Blakiston's Sons & Co., 1900. Price \$7.00.

A very thorough, concise, practical text-book, characterized by clear and comprehensive descriptions of symptoms and word pictures of the numerous pathological conditions. As the book is written more especially for the advanced student or practitioner, more attention is given to the symptomatology than to the minuter points of pathology and histology.

Eighteen different causes of deafness are considered, and forty-four diseases of the larynx are described.

This third edition has been considerably revised and re-written, bringing it abreast of the very latest advances in our special lines. Still we notice that the author adheres to the older opinion, in opposition to the majority of the more recent writers, that antral diseases are principally or most frequently of dental origin.

The illustrations are few, but all colored and natural in appearance.

The publishers have produced the work in their usual English style, with gilt top, fully befitting the contents. A fine addition to any professional library. A. W. P.

RETINOSCOPY (OR SHADOW TEST) IN THE DETERMINATION OF REFRACTION AT ONE METER DISTANCE WITH THE PLANE MIRROR. By JAMES THORINGTON, A. M., M. D., author of "Refraction and How to Refract"; Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, Ophthalmologist to the Elwyn and Vineland Training Schools for Feeble-Minded Children, Ophthalmologist to the M. E. Orphanage, etc. Fourth Edition, Revised and Enlarged. Fifty-one illustrations, twelve of which are colored. Pp. 89. Philadelphia: P. Blakiston's Son & Co., 1901.

The best work on this subject, and very well indexed. The whole subject has been carefully gone over, new paragraphs and

eight new illustrations added. Translations into the French and German have been asked for, and are in course of preparation. No oculist should condemn retinoscopy before giving it a fair trial according to our author's instructions.

Again we express our sorrow that another teacher and author lacks scholarship in so far that he uses the old terms astigmatism and astigmatic instead of the proper words astigmia and astigmatic. In the next edition we hope this correction will be made.

J. L. M.

CURABILITY OF TUMORS BY MEDICINES. By J. COMPTON BURNETT, M. D. Second Edition Revised. Philadelphia: Boericke & Tafel, 1901. Pp. 345. Price, cloth, \$1.25 net; by mail, \$1.34.

Always suggestive and interesting, our author is again well worth reading by everyone, even by those who think that "what I don't know isn't knowledge." He holds with Hunter that when we cut out a tumor we get rid only of the product of the disease, not of the disease itself, often the operative interference acting like a pruning knife—increasing the tumor-producing power and hastening death. The indications for the use of remedies in curing tumors are so meager that few believe in, and still fewer undertake, their medical cure. To cure a disease by remedies they must stand in some relation to the disease process, no matter whether the symptoms reveal the process or not. If the symptoms spell out the morbid process, the symptoms suffice. The physician who never gets beyond—goes behind—the symptoms, is like a reader who always has to spell his words. Answering the objection to the number of his remedies in a given case, and the question, "Which cured?" he says: "In difficult, chronic, complicated cases of disease you require a series of remedies, not one of which can itself effect the cure, but each of which works cure-wards, their cumulative action eventuating in a cure—that is how I cure cataract and many other chronic 'incurable' diseases. Ringing the change of like-acting remedies conduces the more quickly to a cure; bacillinum acts beautifully after, and sometimes only after, the administration of thuja."

One of the new remedies introduced by him—from a fragmentary proving upon himself of the leaves and berries—is *Cupressus Lawsoniana* (cypress); he thinks it acts like thuja, and

reports it as completing the cure of a warty coxcomb tumor under the tongue, and of a pre-aural keloid. J. L. M.

MENTAL DISEASES AND THEIR MODERN TREATMENT. By SELDEN HAINES TALCOTT, A. M., M. D., Ph. D., Medical Superintendent of the Middletown State Homœopathic Hospital in Middletown, N. Y.; Professor of Mental Diseases in the New York Homœopathic Medical College and Hospital. New York, Boericke & Runyon Co., 1901. Pp. 352. Price, \$2.50, including postage.

Ten lectures with a compendium, 88 pages, of indications for homœopathic remedies. An interesting and valuable book, but we venture two criticisms. On the title page and in the dedication homœopathic is spelt without the diphthong, an extreme to which spelling reform should not be carried because : (1) by the diphthong the derivation and meaning are better indicated ; (2) not infrequently syllabification at the end of the line turns the word into home-opathy, which is an inelegance and endangers degeneration of the word and its pronunciation.

Our other criticism is that Dr. Talcott ignores the possible and even probable causal or exciting relation of ocular disturbances to mental derangements. Cases have been reported of cure of insane patients by remedying heterophoria and correcting errors of refraction. Our author states that "whatever tends to the weakening of the cerebrum or exhaustion of the central forces of life must necessarily favor the inception and growth of insanity." The homœopathic indications for remedies are clear, terse, and invaluable, because they have the authority of twenty-five years' experience of this hospital. J. L. M.

INDEX TO HOMŒOPATHIC PROVINGS. By THOMAS LINDSLEY BRADFORD, M. D., author of "Life of Hahnemann," "Homœopathic Bibliography," and "Pioneers of Homœopathy." Philadelphia: Boericke & Tafel, 1901. Pp. 305. Price, cloth, \$2.00 net ; by mail, \$2.10.

A valuable book, which should be in every medical library and at the command of every homœopathist who aspires to a knowledge of the tools of his trade. As its name implies, it is a guide to publications containing records of the effects of drugs and poisons upon the healthy human body ; in some cases reference has been made to experiments upon animals and to certain drug results that may not strictly be classified as pure

homœopathic provings. All the homœopathic journals obtainable have been carefully examined and comparisons have been made with the references in Allen's "Encyclopedia," the "Cyclopedia of Drug Pathogenesis," the "Guiding Symptoms," and some references have been added from these authorities. The names of the remedies have been obtained from the American Homœopathic Pharmacopœia, the British Homœopathic Pharmacopœia, from Dr. H. M. Smith's "List of Homœopathic Medicines," and from the standard botanies. J. L. M.

THE A B C MANUAL OF MATERIA AND THERAPEUTICS. By G. HARDY CLARK, M. D. Philadelphia : Boericke & Tafel, 1901. Pp. 197.

An attempt to simplify the subject by referring only to toxic effects of drugs, their therapeutic uses in non-toxic doses, and eliminating controversial matter. It may help someone to comprehend and remember the action of these drugs, but to us it is very unsatisfactory. Under *apis* the only sentence that does not mention, or is not qualified by "œdema," is that prescribing the dose. Not a hint of scanty urine, fever, or drowsiness! Under *iodum* therapeutic indications are given for compound tincture, iodide of potassium, ammonium iodide, iodoform, and sodium iodide. The writer has "freely drawn from the writings of Bartholow, Hempel, Hughes, Ringer, Stillé, Wood, and others."

J. L. M.

ANNOUNCEMENTS.

Under Book Reviews in our last issue the name of the author of "A Treatise on the Diseases of the Ear" should be T. Mark Hovell, F. R. C. S. Edin., etc.

We shall issue a National Society number, and, being as yet but a bi-monthly, our report of the May and June meetings of these societies must of course appear in our July number. We will ask the further indulgence of our friends, and hold our July issue till the latter part of that month or the first of August, instead of appearing, as calculated, July 1.

May 27-29.—American Laryngological Association, New Haven.

May 30-June 1.—American Climatological Association, Niagara Falls.

June 7.—American Medical Association, St. Paul.

June 15-18.—American Homœopathic Ophthalmological, Otological, and Laryngological Society.

June 17-18.—National Society of Electro-Therapeutists.

June 18-21.—American Institute of Homœopathy, Richfield Springs.

AMERICAN INSTITUTE OF HOMŒOPATHY.

The Executive Committee beg to announce to the members of the Institute and the profession generally the following important notice as to railroad arrangements and the programme of entertainment offered to the Institute and its guests by the citizens of Richfield Springs.

The usual fare and one-third rate for the round trip, on the certificate plan, has been granted by all the roads.

Arrangements have also been made whereby all members coming from the western country via Buffalo can stop over at the Pan-American Exposition for ten days on any kind or character of ticket, providing said ticket is deposited with joint agent, No. 50 Exchange Street, Buffalo, and the payment of one dollar made.

For those who come from the eastern country, New York Central, West Shore, and Lackawanna will make an amicable arrangement that will grant our members a sufficient stop over at Binghamton or Utica, at which points they can procure regular excursion tickets to Buffalo and return. This will allow members from the East to attend the exposition at a very slight additional expense.

Through parlor cars will be run direct to Richfield Springs from both the East and the West. The Delaware and Lackawanna Road will put on its summer schedule of trains for the session of the Institute, which provides close connections at both Utica and Binghamton.

The Entertainment Committee and the citizens of Richfield Springs offer the following unusually fine social programme, which has been so arranged as not to interfere with the work of the Institute:

Saturday, June 15.—Open air concert, Richfield Springs Military Band, 3.30 P. M.

Sunday, June 16.—Sacred vocal and instrumental concert in the Earlington Hotel parlor, 8.30 P. M.

Monday, June 17.—Open air concert, Richfield Springs Military Band, 3.30 P. M.

Tuesday, June 18.—Open air concert, Richfield Springs Military Band, 3.30 P. M. ; grand ball, Hotel Earlington, tendered

to the Institute and its guests by Messrs. E. M. Earle & Son, 10 P. M. ; Supper, 12 M.

Wednesday, June 19.—Drive over magnificent mountain roads to Lake Otsego, the famous "Glimmerglass" of Fenimore Cooper, sail over the lake to Cooperstown, his home; luncheon in Cooperstown, drive home to Richfield along the shores of Lake Otsego, reaching Hotel Earlington about 5 P. M.

N. B.—Each day the ladies of the Institute are invited by the citizens of Richfield Springs to take this delightful excursion to Cooperstown and return.

Music in the parlors Hotel Earlington, 11 A. M.; open air concert in Earlington Park, 4 P. M. ; reception at the Waiontha Golf Club, 4 to 6 P. M., by the president, Mr. T. R. Proctor ; progressive euchre party, tendered by Messrs. Earle & Son in the Earlington parlors, 9.30 P. M.

Thursday, June 20.—Drive to Cooperstown and return (same as Wednesday) 10 A. M. to 5 P. M. ; music in the Earlington parlors, 11 A. M. ; open air concert, 4 P. M. ; musicale in the parlors of Hotel Earlington, 9.30 P. M.

Friday, June 21.—Drive to Cooperstown and return (same as Wednesday) 10 A. M. to 5 P. M. ; music in Earlington, 11 A. M. ; open air concert, 4 P. M. ; grand complimentary vaudeville entertainment tendered to the Institute and their guests by the Entertainment Committee and citizens of Richfield Springs. (It will be the endeavor of the committee in charge of this entertainment to procure in New York City for this performance only the very best available talent, and no expense will be spared to make this vaudeville performance one of the highest class.)

Saturday, June 22.—Music in Hotel Earlington parlors, 11 A. M. ; at 2 P. M., at the Lake House, on Canadargo Lake, a clambake tendered by the Entertainment Committee and the citizens of Richfield Springs ; music by the Richfield Springs Military Band.

The citizens of Richfield Springs announce it as their purpose to make every member of the Institute pleased with his visit. They do this as an advertisement of their health resort, and the committee feel assured that the session of 1901 will be the most pleasant one in the history of the Institute.

A. B. NORTON, M. D.,
President.

E. H. PORTER, M. A., M. D.,
Secretary.

THE AMERICAN HOMŒOPATHIC OPHTHALMOLOGICAL,
OTOLOGICAL, AND LARYNGOLOGICAL SOCIETY.

DEAR DOCTOR :

At the next meeting of the American Homœopathic Ophthalmological, Otological, and Laryngological Society, which will

open its session in the parlors of the Hotel Earlington, Richfield Springs, N. Y., on Saturday, June 15, at 2.30 P. M., and hold sessions on Monday and Tuesday, the 17th and 18th, it has been arranged to have Mr. M. R. Hutchison, E. E., exhibit his recently perfected *akouphone* and *akoulalion*, micro-telephonic instruments so constructed as to reproduce and intensify sounds and still preserve their quality.

This represents, probably, the greatest advance that has yet been made in adding to the hearing power of those who are incurably deaf, and, as Mr. Hutchison will give an explanatory lecture on Monday evening, it has been decided by the officers of the Society to invite the members of the Institute and all visitors who are interested to attend this session. Those who desire to have friends or patients test the instruments are requested to bring them to Richfield at this time, and Mr. Hutchison will be glad to give each an opportunity to test the efficacy of *akouphone*.

Fraternally yours,

HERBERT D. SCHENCK, M. D., Secretary.

We are pleased to announce in press, Jousset's "Practice of Medicine," ready May 30, 1901. Jousset is the foremost consulting physician of France, and was president of last year's International Congress. The book embodies the results of forty and more years' experience. Every page breathes forth his personality. He not only gives the remedy used and the dosage, but his why and wherefore. He has written forcefully, and of his vast personal experience. This is the third edition; the first two were in French, and the translation is from the author's unpublished manuscript, specially rewritten for the translator, Dr. Arsachouni. Those who have looked over the manuscript are enthusiastic in its praise.

The Delaware, Lackawana and Western Railroad is making especial efforts to accommodate all wishing to attend the Richfield Springs meeting, June 15-21, of the American Institute of Homœopathy, its Surgical and Gynæcological Association, the American Homœopathic Ophthalmological, Otological, and Laryngological Society and the National Society of Electrotherapeutists. Through parlor cars will be run direct to Richfield Springs. As all who have once traveled with this company know, its roadbed, rolling stock, and management are unexceptionable.

THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

EDITOR,

JOHN L. MOFFAT, M. D.

ASSOCIATE EDITOR,

A. W. PALMER, M. D.

EXTRA-AURAL DISEASES.*

ELMER JEFFERSON BISSELL, M. D.

Rochester, N. Y.

THOROUGH training and the educational quality of experience are in no way more manifest in a physician than in his ability to nicely discriminate between the diagnostic and therapeutic value of symptoms. A synthesis of symptoms for diagnostic purposes should be conducted with as much penetration and care as the indications for a remedy. There is a fascination in searching for the cause of symptoms, and the physician who follows this search faithfully and intelligently will be saved from many therapeutic as well as diagnostic mistakes. The truth of this is in no way better illustrated than in extra-aural diseases, or, as more commonly spoken of, the complications arising in the course of ear diseases. These complications, serious in character, usually hidden from sight and touch within the cranial cavity, and often presenting varying and contradictory symptoms, can be detected and differentiated only by the most careful estimation of the diagnostic value of symptoms. At times even with the best means at our command the diagnosis must be one of probability, and the surgical procedure, if indicated at all, must be exploratory.

* Presented to the American Institute of Homœopathy, Richfield Springs, June, 1901.

Yet I believe that with scientific tests applied to the urine, blood, and cerebro-spinal fluid, together with an intelligent appreciation of the few or many symptoms present, an accurate diagnosis can usually be made.

The extra-aural diseases to be considered are meningitis, brain-abscess, extra-dural abscess, and thrombosis. A full consideration of any one of these aural complications would require more time than the few minutes allowed for this essay, and so what I present must be suggestive rather than exhaustive. Therefore I shall only attempt to indicate the meaning and value of certain symptoms and scientific tests.

Transillumination and the Roentgen ray have so far proven of doubtful or negative value.

The presence of peptones in the urine strongly suggests the probability of brain-abscess or purulent meningitis. Here is an aid in diagnosis of considerable importance, which is, I fear, frequently ignored. In brain-abscess diagnostic symptoms are often distressingly few. The presence of peptones in such a case is of great significance. I have verified its value, and as it is an unusual test I will give the method of making it: Saturate the urine—slightly acidified first with acetic acid—with ammonium sulphate, and filter out any precipitate formed, which may consist of albumin, globulin, proto-albumose, hetero-albumose, or deutero-albumose. Any proteid remaining may be precipitated by potassio-mercuric iodide or picric acid, and can only be peptone.

As I have indicated, this test does not differentiate between brain-abscess and meningitis, but with the aid of lumbar puncture we may be able to decide between these two conditions. So many accurate observers have testified to the value of lumbar puncture in the diagnosis of meningitis that no aural surgeon should fail to employ this simple and comparatively harmless test when in doubt of a case. It is not to be used as a routine measure in every case of mastoid disease, but employed only when other symptoms suggesting intra-cranial complications are obscure or con-

fusing. Whether to operate or not may depend upon the conditions revealed by lumbar puncture. If the withdrawn fluid is cloudy (from cells) and contains fibrin, there can be no doubt as to the presence of meningitis; the degree of cloudiness fairly indicates the extent of the meningitis. Chemical, microscopical, and bacteriological tests of this cerebro-spinal fluid may give additional information, even indicating the character of the meningitis. Lumbar puncture, therefore, is chiefly of value in differentiating between meningitis and brain-abscess.

In extremely masked cases an examination of the blood for leucocytosis may be of service. If the mastoid cells, antrum, and middle ear have been cleared of all diseased tissue and suppuration has apparently ceased, yet a blood count shows increasing leucocytes, some undetected focus of suppuration may be inferred. Leucocytosis is caused by such varied conditions, and withal has so little localizing value in pyemic states, that it is of but limited service in diagnosing extra-aural diseases.

The information to be gathered from an ophthalmoscopic examination of the eye fundus must be kept in mind. I go so far as to maintain that no mastoid case is thoroughly examined if the ophthalmoscope has been neglected; and in any case of suspected intra-cranial complications it should be repeatedly used.

If *optic neuritis is present some intra-cranial lesion exists*, even if other symptoms are wanting. The character and location of the lesion cannot, however, be determined from the appearance of the eye fundus, but it is no small gain in some cases to be able to assert that some intra-cranial lesion is present. Optic neuritis usually indicates a brain-abscess, probably cerebellar, unless other symptoms strongly suggest some other lesion.

Paralytic deviation of the eyes, homonymous hemianopsia, and word blindness are important symptoms of localizing value. It is well to keep these two latter symptoms in mind, and test for them in protracted cases of suppuration of the ear. Last year I was called in council to

see a case of suppuration of the middle ear with no mastoid symptoms. The patient was dressed and sitting up; had been under the care of a specialist for weeks. On noticing a slow mentality, I gave him a paper to read. This he could not do. Homonymous hemianopsia and other symptoms were then elicited, leading to a diagnosis of abscess in the left occipital convolution. An operation the next day revealed a large abscess in this location. Neglect in testing his field of vision and his ability to read would have probably resulted in an incorrect diagnosis.

A careful temperature record should be kept, for at times it holds a prominent place in making a diagnosis of some serious extra-aural disease. It is always my rule to order at least a six-hour chart. The full significance of the changes of a pus temperature will often escape observation unless frequent records mark its fluctuations. The very appearance of such a chart graphically suggests the nature of the disease.

In the four complications mentioned, meningitis, brain abscess, extra-dural abscess, and thrombosis, there are quite clearly defined differences of temperature. We should have no confusion of mind as to what these differences are, for they can generally be relied upon for diagnostic aid, although exceptions will occur which we must be prepared to meet. Briefly, these differences are as follows:

In meningitis, at the beginning, the temperature rises to a medium height of 100° to 104° , and later even higher, but does not usually fall below 100° ; the fluctuation between the highest and lowest temperature in twenty-four hours is slight, and passes gradually from one to the other, usually reaching its highest degree at night.

In brain and extra-dural abscesses the temperature, while not falling quite to normal, as in meningitis, does not reach the height of meningitis; in fact, it is almost a continuous fever of 99° to 100° , inclined to be a little higher in extra-dural than in brain-abscess.

In sinus thrombosis the temperature record is of great diagnostic importance. Its prominent characteristic is

frequent fluctuations, rising in twenty-four hours to a height of 105° to 106° , and then dropping to sub-normal; this high temperature is usually preceded by a decided chill. During this past winter I operated upon a case of thrombosis which for three successive days previous to my seeing it had had fluctuations of ten degrees in each twenty-four hours, from 96° to 106° . In contra-distinction to meningitis the highest point may be reached at any hour within the day or night.

If an apparently thorough mastoid operation has been performed, and yet a markedly pus temperature remains, do not be too hasty in concluding that some one of these complications exists, for if there has been a failure to open up *every* mastoid cell containing pus, such a temperature may continue.

Making due allowance for frequent exceptions, the character of the pulse in meningitis is markedly accelerated and fairly strong; in brain and extra-dural abscesses it is slow and inclined to be weak, while in thrombosis it is very rapid and extremely weak. The co-existence of more than one of these intra-cranial complications not only greatly varies the character of the pulse, but all symptoms upon which we rely for a clear-cut diagnosis.

I have come to place great reliance upon the character and location of pain in these intra-cranial lesions. Surely when dealing with such serious condition its warning should be heeded and its cry of danger not stifled by anodynes.

In meningitis a nearly constant headache, quite general in character but worse upon the side of the diseased ear, is usually one of the first and most persistent symptoms.

In brain and extra-dural abscesses the pain is localized over the region of the accumulated pus, and pressure pain is frequently elicited over the involved area.

In thrombosis pain along the course of the lateral sinus and jugular vein may be present, but is of uncertain character; pressure pain over the knee of the sinus is often markedly prominent.

These indications presuppose that the mastoid has been surgically cleared ; if such an operation has not been performed, the pent-up pus within the mastoid would partially mask these differential symptoms. The absence of pain may have a diagnostic value ; for I have observed if there have been decided evidences of mastoid involvement with the classical symptoms of tenderness, swelling, and pain, followed by a sudden cessation of pain with no markedly increased secretion through the meatus, the probability is that the pus has escaped from the mastoid either into the digastric fossa, as in Bezold's form of the disease, or has opened into the cranial cavity ; therefore, possibly, for twenty-four hours the patient may seem decidedly better. I have now under my care a case which followed exactly this latter course.

There are many other symptoms of varying frequency which could be enumerated, but the purpose of this paper will have been attained if I have succeeded in clearly setting forth the diagnostic value of a few usually constant symptoms.

75 South Fitzhugh Street.

EXTRA-NASAL DISEASES OF THE NOSE.*

A. WORRALL PALMER, M. D.

New York.

WHEN accepting the honored invitation of the chairman of this bureau to address you upon this subject, the speaker did not appreciate what a task of condensation he was undertaking. The scope of this subject includes the nasal accessory sinuses, the lachrymal duct, and the Eustachian tube. But this paper will be confined to the consideration of the accessory sinuses.

Although these are quite diminutive in size, and the study of them is of comparatively recent date, as there is no mention of the diseases of these sinuses in the last edition (1884) of Morrell Mackenzie's thoroughly scholastic textbook on Diseases of the Nose and Throat; still, as short a consideration of them as would do their importance justice and be instructive to my hearers, I fear will exceed the time allotment.

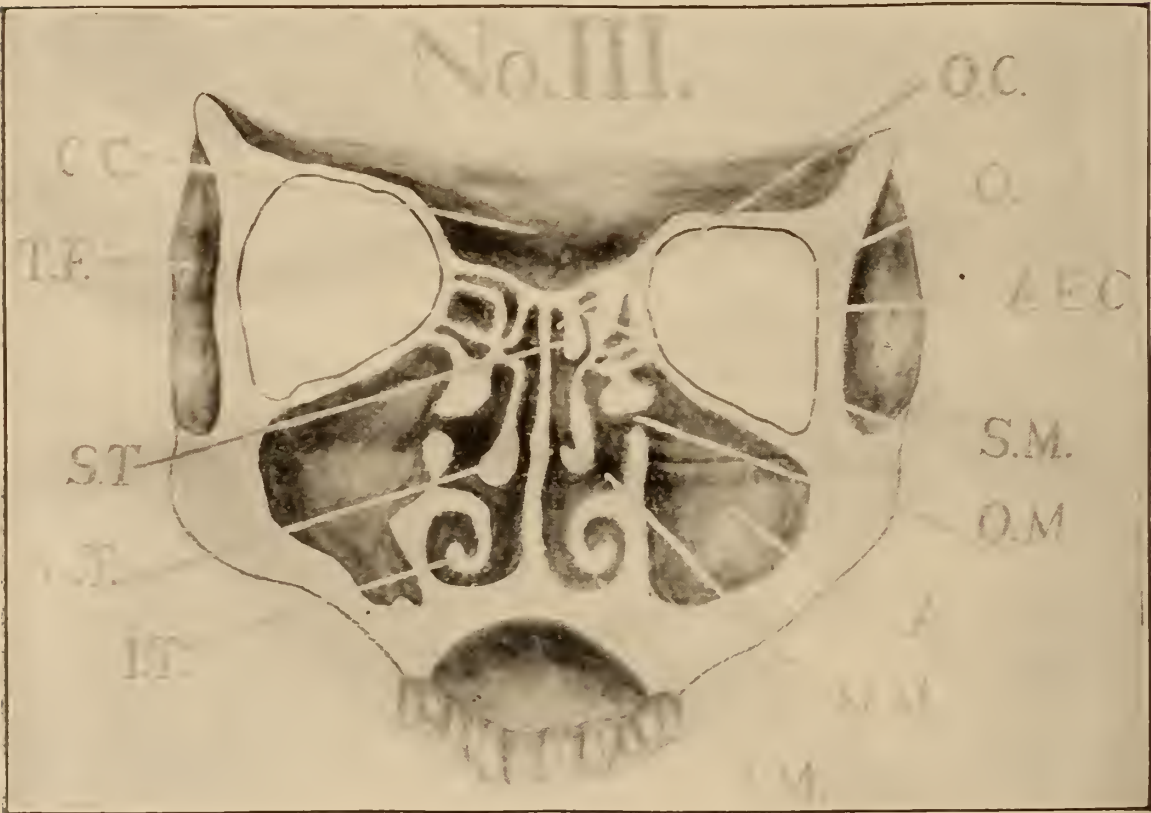
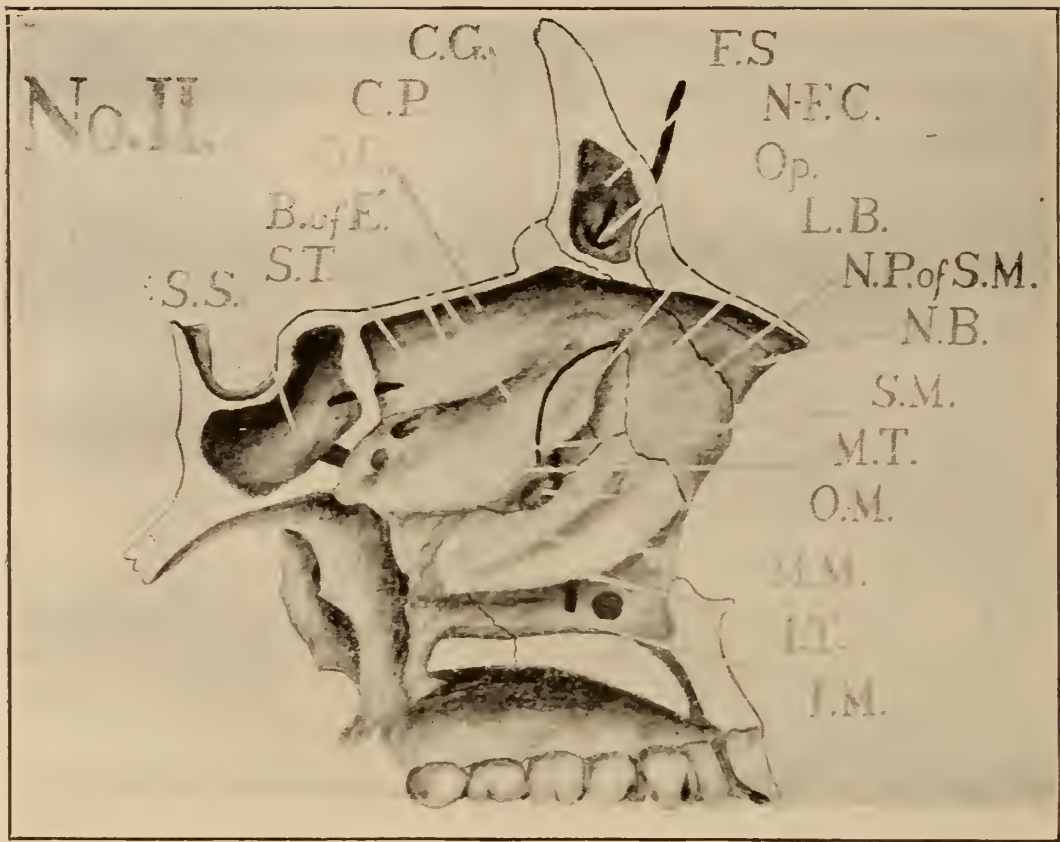
As many of us possibly slighted these apparently insignificant cavities in our anatomical studies, a review of their **anatomy** may be apropos.

We are all familiar with Fig. 2, which is an enlargement of Fig. 159 in Gray's "Anatomy." It is a sagittal section of the anterior portion of the skull, showing the outer wall of the left nares.

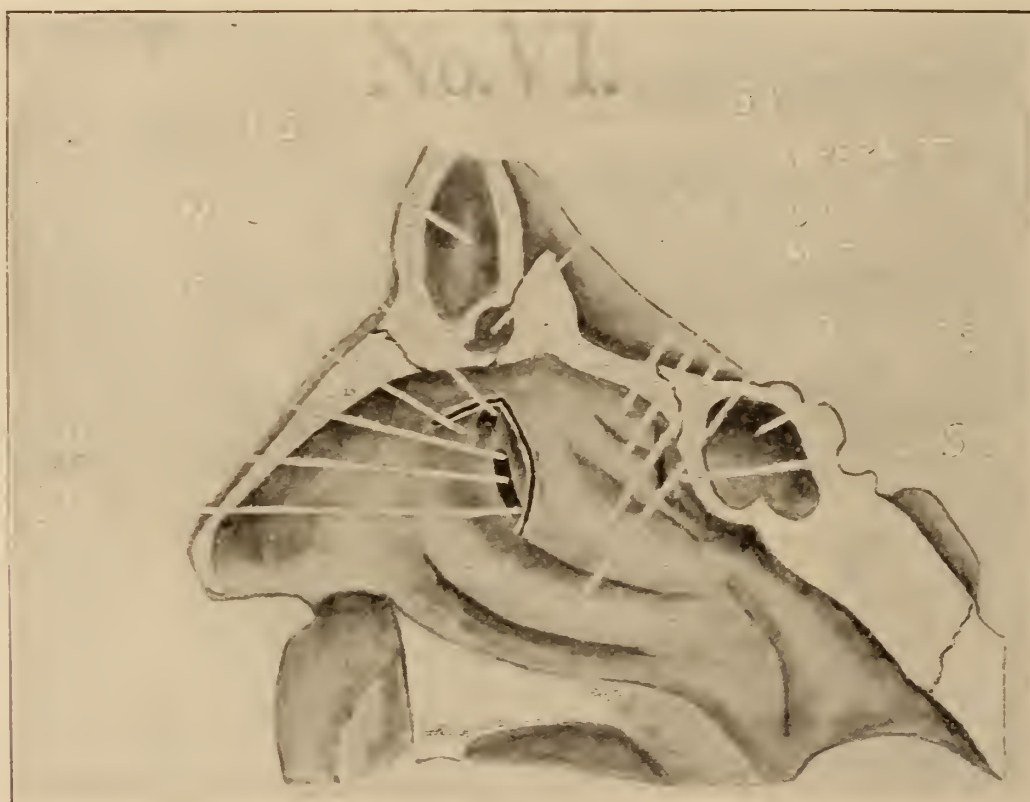
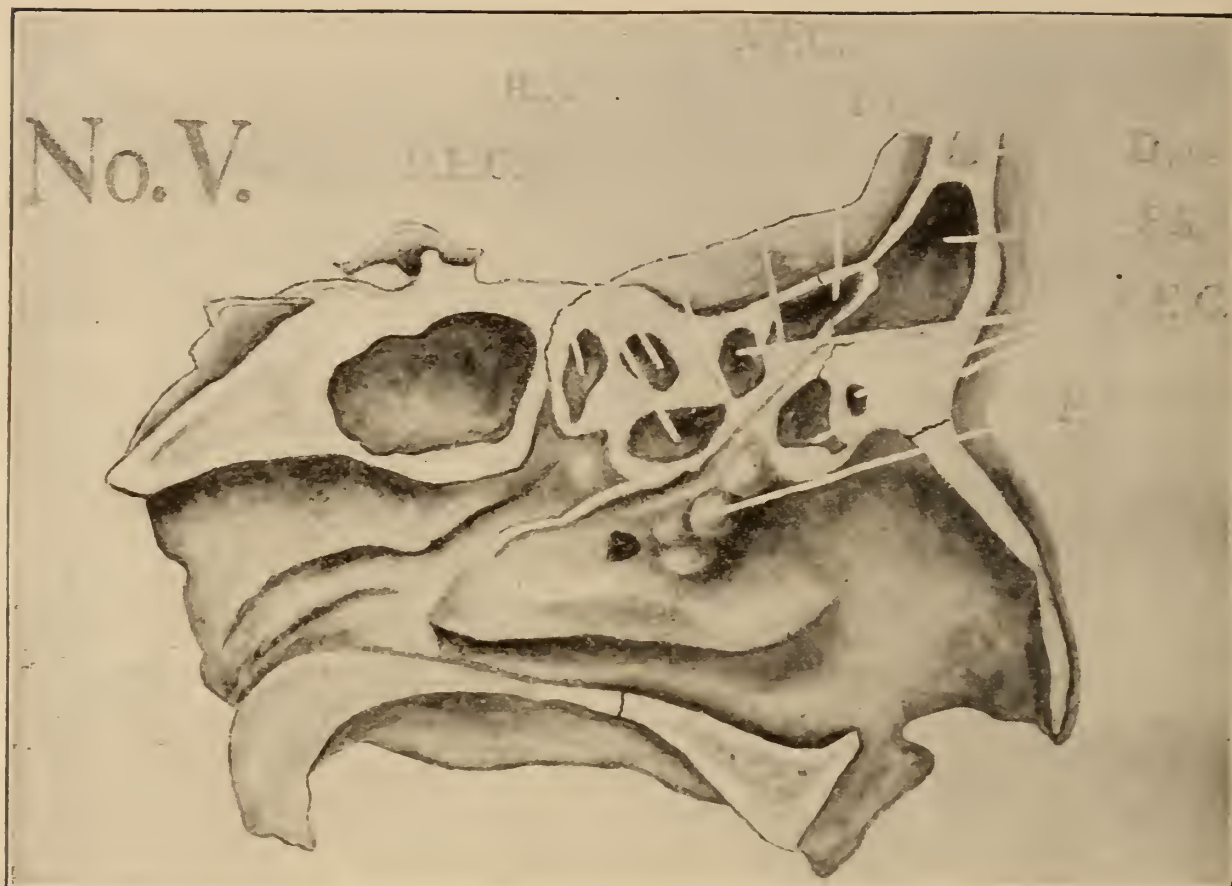
F. B. (Fig. 2,) Frontal bone.

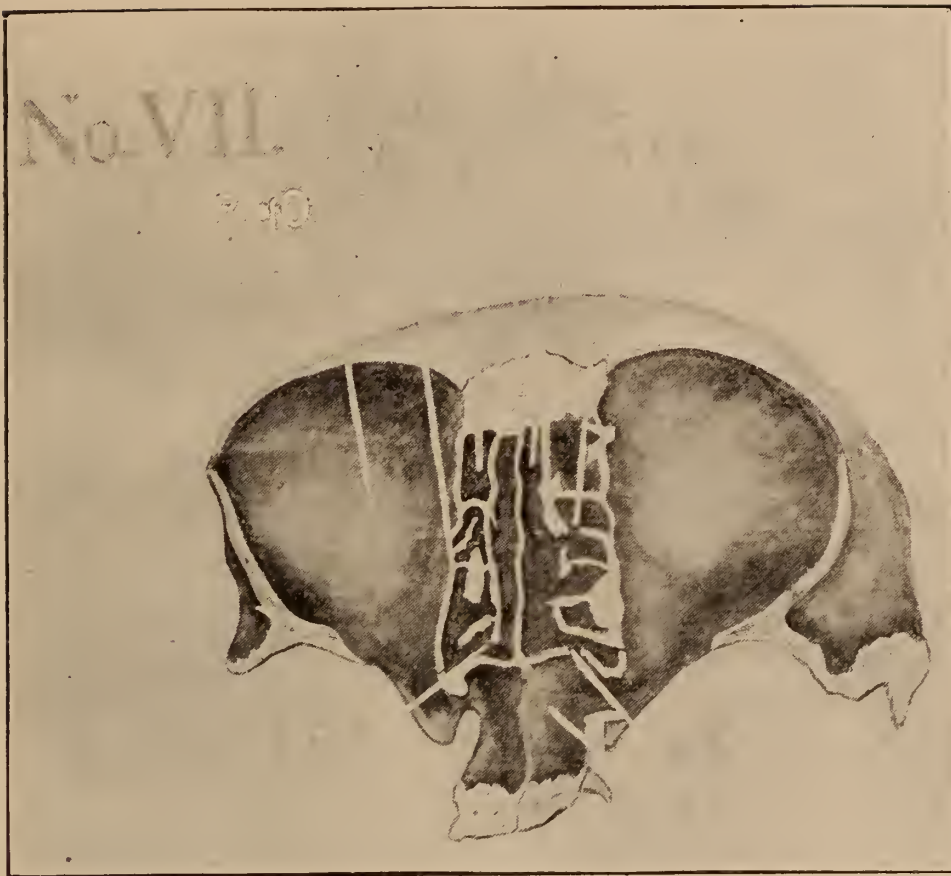
F. S. (Fig. 2, 5, 6,) Frontal sinus, opening by the

* Read before The American Institute of Homœopathy, Fifty-Seventh Annual Meeting, Richfield Springs, N. Y., June 19, 1901.



- N. F. C. (Fig. 2, 6,) Naso-frontal canal into either the
I. (Fig. 6,) Infundibulum or
T. B. (Fig. 6,) Turbinate fossa, an arbitrary space beneath the anterior third of the middle turbinate.
- I. M. (Fig. 2, 3, 10,) Inferior meatus.
I. T. (Fig. 2, 3, 10,) Inferior turbinated bone.
M. M. (Fig. 2, 3, 10,) Middle meatus into which opens the
H. S. (Fig. 5, 6,) Hiatus semilunaris, which is covered by the anterior third of the
M. T. (Fig. 2, 3, 10,) Middle turbinated bone, which is called by some the
Op. (Fig. 2,) Operculum.
- The hiatus semilunaris is a moon-shaped depression; the upper extremity is called the infundibulum, and into the lower extremity opens the
- A. (Fig. 3, 10,) Antrum by the
O. M. (Fig. 2, 3, 6,) Osteum maxillare.
S. T. (Fig. 2, 3, 10,) Superior turbinate.
B. of E. (Fig. 2,) Body of ethmoid. In which, if another section of bone be removed, we find the
A. E. C. (Fig. 3, 5, 7, 10,) Anterior ethmoidal cells and
P. E. C. (Fig. 5, 7,) Posterior ethmoidal cells.
F. B. (Fig. 5, 6,) Frontal bulla, which is a cell formed partly by frontal and partly by ethmoid bone.
- The anterior ethmoidal cells open into the infundibulum, turbinate fossa, and middle meatus by minute openings called *ostea ethmoidalia*, while the posterior ethmoidal cells open into the
S. M. (Fig. 2, 3,) Superior meatus, the





No. X.

Cell in
C.G.

S.T.

M.T.

I.T.

A.E.C.

M.M.

A.

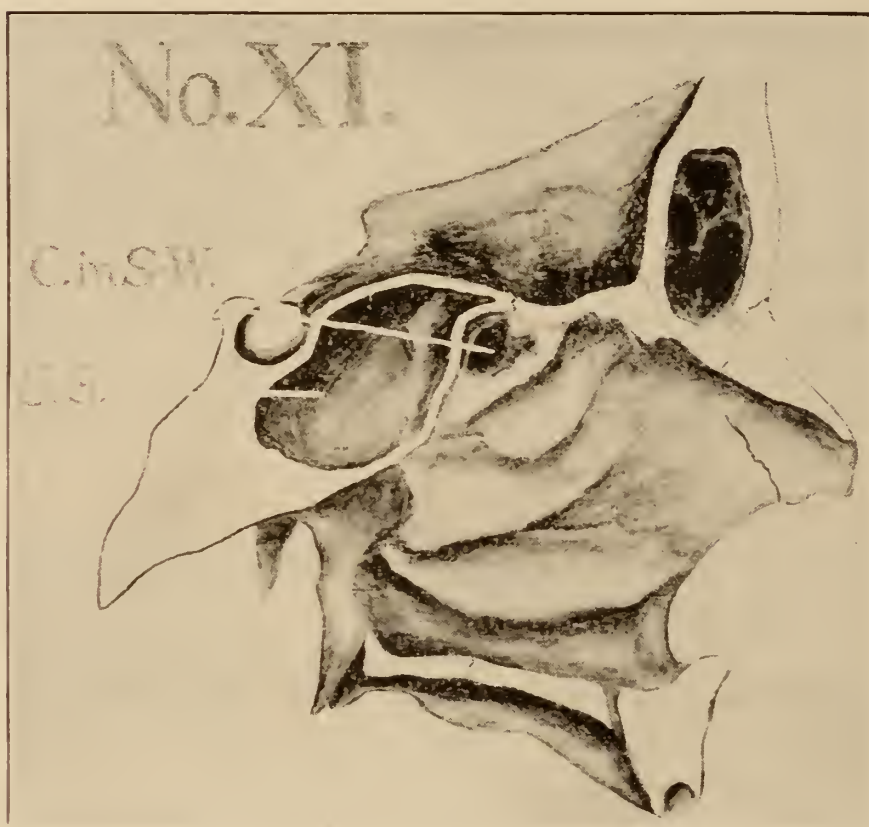
I.M.

A.P.

O.E.

A.

- S. E. F. (Fig. 6, 7,) Spheno-ethmoidal fissure, and
 S. S. (Fig. 2, 5, 6, Sphenoidal sinuses, which are cavities
 11,) situated in each lateral half of the body
 of the sphenoid bone. These occasion-
 ally extend out into the wings of said
 bone as in Fig. 11. They open into the
 spheno-ethmoidal fissure by the
 O. S. (Fig. 7,) Osteum sphenoidalium.
 Figure 7 is a horizontal section of the



- anterior portion of the skull, looking up-
 ward, showing the irregularity of the
 ethmoidal cells (A. E. C. and P. E. C.),
 also their relation and proximity to the
 O. (Fig. 3, 7, 10,) Orbital cavity, only the thin plate of
 bone, the lamina papyracea or
 O. P. (Fig. 3, 7,) Os planum, separating them.
 O. C. (Fig. 2, 3, 7,) Olfactory crypt, the space above the
 superior turbinated bone.
 C. P. (Fig. 2,) Cribriform plate

- C. G. (Fig. 2,) Crysta-galli, in which is occasionally found the
 C. of C. G. (Fig. 10.) Cell of the crista-galli, communicating with the anterior ethmoidal cells.

All these sinuses are lined with mucous membrane which is thinner, paler, and more delicate than the Schneiderian membrane, approaching the squamous variety, containing no cavernous tissue and very poorly supplied with glandular elements.

While the topography of these sinuses is fresh in your minds, we would like to draw your attention, first, to the great irregularity of these cavities, making the management of disease in this locality most difficult and not always immediately satisfactory; and, second, to their intimate relation and close proximity with two of the most important organs of the body,—the brain and eye,—therefore the great importance of diseased processes within them.

The **physiology** of these cells has been little studied. Undoubtedly one of their offices is to lessen the weight of the skull, and another to modify and give volume to the voice, while the other supposed uses have been so little proved that it would be superfluous to mention them here.

The **diseases** to which these cavities are prone are similar to those of the nasal fossa, to wit: in all of them may be found

1. Catarrh { *a.* Acute.
 b. Chronic.
2. Empyema { *a.* Acute.
 b. Chronic.
 c. Confined suppuration.
3. Mucocele.
4. Tumors { Benign.
 Malignant. (Which section will be considered by Dr. Rice.)
5. Infectious disease complications—(*a*) syphilis, (*b*)

tuberculosis, (*c*) erysipelas, (*d*) diphtheria, (*e*) la grippe, or influenza.

6. Necrosis.

Into the antrum of Highmore and frontal sinus foreign bodies have obtained entrance.

Lastly, only the antrum has been noticed to be affected with ozæna, emphysema, or phlegmonous inflammation.

But on account of the identical histological formation of the those sinuses, I doubt not that as we observe them the more carefully in the future we may find each of these diseases in all the cavities.

Because of the diminutive size of the openings of all these sinuses, and almost universal consequent retention of the products of their different diseases, the condition usually has proceeded to an emphysema before the patient applies to the physician for treatment; therefore the consideration of the ætiology, symptomatology, etc., of emphysema of these cavities will give the most comprehensive idea of the subject for an article of this scope.

Ætiology.—The principal causes are : first, the extension of pathological conditions of the mucosa by continuity from the nose, as I have even seen them follow aural disease ; but this latter might be included under the second, infectious causes. These are quite prolific, because the entrance of microbes, etc., is easy though their opening from the nasal fossa, than which there is no space in the body more exposed to infection ; third, the occlusion of the sinusal outlets causes (*a*) a diminished air pressure, which brings about an exudation from the glands ; and, furthermore, this same obstruction causes (*b*) the retention of said exudate, which, decomposing, in turn irritates the lining membrane to further exudation.

In the case of the antrum, on account of its proximity to the buccal cavity (the tooth-roots of the bicusps and first molars occasionally extending even into its floor) disease of the upper teeth is not an infrequent ætiological factor. Although it is by no means responsible for such a majority of cases as was credited to it a decade ago.

The **pathological** changes to which the structures of these sinuses are subject are similar to those of the nasal fossa. Of the lining mucous membrane we find (*a*) simple, (*b*) hypertrophic, and (*c*) atrophic catarrhal inflammations, (*d*) polypoid degeneration, (*e*) ulcerations—*e. g.*, syphilitic, tubercular, etc., and (*f*) tumors.

As in my first article on this subject, read before the New York County Homœopathic Medical Society, in November, 1893, I will combine the **symptomatology** and **diagnosis** for the sake of brevity. For the same reason I will not attempt to differentiate the diseases of the several individual sinuses.

The patient usually presents himself, complaining of (*a*) an orange-colored, tenacious, muco-purulent nasal discharge, generally unilateral; (*b*) obstruction of the nares, (*c*) extensive polypoid development, (*d*) subjective peculiar sour or putrescent odor, recognized only by the patient himself. At other times ozænal symptoms may direct our attention to the sinuses. There are some physicians of indisputable reputation who believe ozæna is always caused by diseases in the sinuses.

Examination shows tumefaction of the mucosa or bone in the nares, somewhat differing in locality in accordance with the sinus or sinuses implicated. A peculiar glazed, dry, swollen appearance of the operculum and body of the ethmoid obtains when the ethmoidal cells are affected. Usually the discharge is seen in the locality of the outlet of one or more of the sinuses.

Edw. A. Roughton, in his lecture before the Harveian Society of London last year, very tersely and pertinently said: "It is now generally recognized that the presence of polypi, together with purulent discharge, indicates disease of one or more sinuses; the polypi are secondary to the sinus suppuration, and cannot be cured without treatment of the primary disease."

Not infrequently there is supra-orbital neuralgia in frontal sinusitis and occasionally pain on pressure over the sinus; in antral sinusitis we may have infra-orbital pain or neural-

gia, though very seldom except in acute inflammatory cases, while pain on pressure is also very rare. The dull, heavy pain or discomfort accompanying ethmoidal disease is referred to the vertex principally, and that accompanying sphenoidal to the occipital region and nape of the neck.

The subjective symptoms are oftentimes very misleading, so that little if any dependence can be placed upon them for diagnosis.

Now if the nares be cleansed and we favor the flow of the contained material from the sinuses, the one affected may be ascertained in this manner. In the natural upright position it flows from the frontal and anterior ethmoidal. Bayer's position is leaning the head down upon the knee, turning it to one side, so that the suspected diseased side is above; gravitation in this position draws the discharge from the uppermost antrum. In diseases of the frontal sinus, anterior ethmoidal cells and antrum, the muco-purulent discharge is seen under the operculum. Simply bending the head forward with face downward aids the egress of discharge from the sphenoidal sinuses and posterior ethmoidal cells, which discharge may be discovered by posterior rhinoscopy on the posterior extremity of the middle turbinated or, if an extreme atrophic endo-rhinitis accompanies it, may be seen but very seldom per anterior nares in the region of the osteum sphenoidalia.

The above idea of drawing the discharge from the diseased sinus is often greatly assisted by Seifert's test; that is, by rarefying the air in the nares by applying an empty Politzer bag to the nostril and allowing it to expand, while the opposite nostril and mouth are tightly closed.

Another very good procedure for diagnosis as well as for treatment in acute cases is,—after cleansing the nasal cavity and cocainizing the mucosa for anæsthetization and shriveling of tissues—to wash out the different sinuses with small canulæ for such purpose; Myle's flexible silver catheter I find most useful. This may be quite satisfactorily accomplished in about three-quarters of the cases of disease of the frontal, anterior ethmoidal, and antral

cavities, especially if a small portion of the operculum has been removed. This removal is of little or no detriment to the physiological action of the nares. It is exceedingly difficult to wash out the sphenoidal sinuses, and impossible to cleanse the posterior ethmoidal cells.

A weak solution of hydrogen dioxide is very helpful in these cases, as it will search out and demonstrate a small amount of muco-purulent matter.

Transillumination in accordance with the Voltolini-Hering method frequently aids in diagnosis.

Transillumination of the antrum is accomplished by placing a three-candle power electric lamp in the mouth, excluding all extraneous light by darkening the room or using a photographer's sheet. In health there is a certain amount of translucency, while when the antrum contains pus or other material it is opaque or cloudy.

For the same reason, during the procedure, if the patient be directed to close the eyes he will discern more light in the eye over the normal antrum than with the eye over the diseased one.

In transilluminating the frontal sinus, a properly hooded light of one candle power or less is placed under the inner end of the eyebrow, when the amount of light transmitted through the tissues, transfusing itself around the lamp hood, assists in distinguishing the diseased sinus.

See Fig. 12; the right side represents the usual normal translucency, while the left side the customary opacity of a diseased antrum. Recently it has been found to be by no means as pathognomonic an indication as it was formerly considered, because the refraction of the light by deflected septa and nasal polypi occasionally causes a diseased sinus to appear translucent; also, the anomalies in the size of the sinuses and the thickness of their walls may cause a normal sinus to appear diseased.

Linck and Michelson affirm that they can perceive a different percussion note over the diseased and normal antrum.

At the present, as you may have inferred, the diagnosis

of disease in the ethmoid and posterior ethmoidal region is principally by exclusion.

When there is a considerable amount of muco-purulent matter pent up in these cavities, even in acute cases, there is not infrequently marked aprosexia, as I can personally



NOTE.—The black marks over eyes indicate position of lamp for transilluminating frontal sinus.

most emphatically affirm. And also complications of the meninges and brain may obtain, especially if the sphenoidal, ethmoidal, or frontal are involved.

The **treatment** should consist first of evacuating the diseased product by the natural orifice, if practical, and if not, by an artificial opening. Cure of the diseased processes in the lining membrane, etc., of these cavities should be aided and hastened by internal medication, which portion of the subject I leave to Dr. Royal. Finally the influences of climate and hygiene must not be overlooked in caring for these cases.

The surgery of these accessory cavities consists of the following operations for their evacuation when necessary :

The antrum was the earliest studied, and therefore a greater variety of operations have been devised for its relief. Jourdain's operation consists in making an opening through the anterior portion of the outer wall of the inferior meatus. Originally it was done by chiseling, but more recently Drs. Lischwitz, Krause, and Myles have devised trocars or drills for this procedure.

The earliest operation employed was that of Cooper ; this is drilling into the maxillary sinus from the root cavity of an extracted bicuspid or first molar, originally performed with a common dental drill, but now Dr. Solis Cohen has made a drill especially for this purpose.

The most satisfactory operation, because it enters the most dependent part of the cavity, and also because it can be made large enough to make an ocular examination of the antrum, is that of Desault. An opening is drilled or chiselled from the buccal cavity through the canine fossa of the superior maxilla into the cavum maxillare.

The Caldwell-Luc operation is really a combination of Desault's and Jourdain's. The Desault is first made to evacuate the bulk of the contained matter, then an opening is made from the artrum into the inferior meatus ; the first opening is allowed to heal by first intention, while the latter is kept pervious for drainage and treatment.

Dr. Kaspariant (Moscow) resects the entire internal osseous wall of the antrum with especially devised knife and conchitome.

The frontal sinus and anterior ethmoidal cells, usually being diseased synchronously, will be considered conjointly. Surgical measures for these may be divided into internal and external operations. The internal consists in cutting from the anterior extremity of the middle meatus through the anterior ethmoidal cells into the frontal sinus with a large aural curette, chisel, or dental drill. This procedure is quite dangerous, on account of the proximity of the brain and orbit to the ethmoidal cells. Therefore some years

ago the writer devised a drill which from its peculiar construction considerably diminishes the danger. Before operating on the ethmoidal cells, in order to obtain access to them, and because they occasionally extend down into the middle turbinated bone, this bone needs to be removed.

The external operation most employed is that of Ogston-Luc. Incision along the line of the eyebrow is made, the bone beneath chiseled or trephined, giving access to the cavity; then the anterior ethmoidal cells are ablated with chisel or curette. For this stage of the operation this set of curved chisels has been devised by the writer, allowing the external incision to be made lower down, thereby leaving the scar in the eyebrow or its shadow, therefore in a less unsightly position.

Kuhnt's operation consists in the complete removal of the anterior wall of the frontal sinus, and allowing the sinus to partially fill with granulations similar to a mastoid operation. This is the most thorough, but leaves a very unsightly scar. Dr. Taptas (Constantinople) extends the external incision of Luc to the lower third of the nasal bone, and chisels through the upper two-thirds of the nasal bone directly into the ethmoidal region and olfactory crypt.

The anterior and posterior ethmoidal cells may be removed by curettage with Myle's ethmoidal curettes after removal of the operculum as mentioned above. These may be more thoroughly extirpated, as described above by Dr. Taptas, or as by Dr. Laurens (Paris), who separates the contents of the orbit from the os planum, and opens through this into the outer side of the body of the ethmoid.

While lastly, the sphenoid may be entered either from the superior meatus through the anterior wall, or from the vault of the pharynx through the floor by means of suitably shaped trephine or drill. This has been considered the most dangerous cavity to operate upon, but I believe in the near future, when we have had more opportunity to study it, this fear will be dispelled. We are at present working upon a drill on similar principles to my frontal drill, which will also diminish the danger of this operation.

SOCIETIES.

Abstracts, with discussions, of the more interesting papers presented at recent meetings.

AMERICAN HOMŒOPATHIC OPHTHALMOLOGICAL, OTOLOGICAL,
AND LARYNGOLOGICAL SOCIETY ; FOURTEENTH ANNUAL
MEETING, RICHFIELD SPRINGS, N. Y., JUNE 15, 17, AND 18,
1901.

C. GURNEE FELLOWS (Chicago) in his paper, "Obstruction of the Lachrymal Apparatus," held that tears (weeping) do not weaken the sight. Their alkalinity is due to the phosphate of lime or soda, hence they are not acrid. Treatment of these obstructions is more conservative than it used to be. Slitting the canaliculus is crude and unsatisfactory; better slit the upper, if either. It is not wise to remove totally the valve at the lower opening of the lachrymal tract. Radical operations are strenuously opposed (except as a last resort) by the older men. The writer objects to large probes, and recommends mild, short, frequent negative electrolysis by means of the ordinary probes. Homœopathic (constitutional) remedies sometimes prevent the development of surgical conditions and obviate operation.

W. B. KREIDER's paper (Goshen, Ind.) was, "A Plea for Simpler Treatment of Stricture of the Nasal Duct." Most cases can be cured without slitting. He nicks the punctum, injects two per cent. protargol freely, and follows this carefully (every day) with a small blunt probe. This cured a chronic case after a month. An acute catarrhal obstruction in a baby of six months he reported cured by calcaria carb.

C. L. RUMSEY (Baltimore) presented, "A New Operation for Relief of Obstruction of the Nasal Duct," which he first performed April 5, 1900. By means of a long blunt probe, 3 mm. x

25 cm., eyeletted for No. 14 silk, which is drawn out of the nose with forceps, an aseptic thread of silk is drawn through the tract, and its ends tied together. The canaliculus is opened but a little way; sometimes cocain is used. The patient is instructed to spray the nose with an antiseptic, and to soak the exposed silk with 1:1000 bichloride each day, then pull it back and forth about one-quarter inch.

F. B. KELLOGG (Los Angeles, Cal.) sent a paper: "Large Probes in the Treatment of Dacryocystitis." Two cases, supplementary to a paper read eighteen months ago before a local society. (1) Cured (for the last two years) by No. 16; after Bowman 5 a discharge could be washed out which had lain in the folds. The passage of large probes is no more painful than that of small ones—under twenty per cent. cocain. (2) Cured with No. 12; injections of Parke, Davis & Co.'s euformal (?), which contains eight per cent. formalin, stopped suppuration in two days. If this cure is permanent it brings the writer's cures up to fifty-nine per cent.

J. N. ANDERSON (Toronto) has cured epiphora by operating upon hypertrophied caruncle—its cause. A flat nose, especially in children, is frequently associated with obstruction of the lachrymal duct. There are cases of lachrymal obstruction while the passage is patent to the probe or syringe; this is from loss of tone in the lachrymal sac, an incurable condition. He endorsed Dr. Fellows' experience with homœopathic remedies.

H. H. Leavitt (Minneapolis) agreed with Dr. Kreider that the probe has been used too much and the syringe too little. He finds difficulty in keeping the punctum from healing. Theobald's large probes result sometimes in tears being blown back when the nose is blown.

A. E. CROSS (Worcester, Mass.) discussing Rumsey: Dr. Pond makes this operation without necessarily opening the canaliculus. The silk must be painful, and there must be danger of contaminating the nasal mucous membrane with streptococci. The field of this operation is unsuccessful cases. Electrolysis is the most satisfactory. The speaker has seen cases cured in two weeks with three- to five-minute applications of 2 to 4 ma. with probes 3, 4, and 5 Bowman. There is less pain, less pressure, and it is not necessary to slit the canaliculus.

G. A. SHEPARD (New York) does not use probes larger than No. 8. He has seen epiphora remaining after the large probes. The suction of the punctum should not be destroyed by slitting the canaliculus, except in acute purulent dacryocystitis.

F. PARK LEWIS (Buffalo) : Seek the cause ; it maybe reflex, from muscular anomalies ; it may be due, in children, to post-nasal adenoids. Its pathology may be an inflammation, not a stricture. Ziegler's bayonet probe is a rapidly enlarging one, with a very small point, that easily enters the punctum, thus avoiding cutting the canaliculus. Its name comes from the way it is set on its handle.

DR. FELLOWS : It is sometimes necessary to remove the sac and gland, but the tendency of the times is decidedly toward conservatism.

DR. RUMSEY : I make my operation as a last resort when there is a well-defined stricture, using ether or chloroform if the patient is very nervous ; the operation is not as painful as dilating with probes. I do not claim that it is infallible. The string is left in about two weeks, usually. I feel sure many external eye diseases may result from the fact that the nasal duct is so patent that germs reach the eye from the nose. Protargol has been successful in my hands. I do not approve Theobald's probes.

Saturday Evening.

BUSHROD W. JAMES (Philadelphia) read a statistical paper on "Operative Procedures in Mature and Immature Cataract," which could not be abstracted. It, as well as all the other papers and proceedings, will appear in the *The Homœopathic Eye, Ear, Throat, and Nose Journal*.

DR. KREIDER thinks the combined extraction the better method for one who operates infrequently. He operated a senile cataract in a woman twenty-eight years old.

DR. RUMSEY : The terms curability and operability of cataract are not interchangeable. I have never been satisfied with my success in ripening cataract ; it has not been so good as by waiting.

DR. FELLOWS : Neither have I had success in ripening ; a number of my cases seemed to be retarded in their course by it.

I believe much of the writing in favor of ripening has been theoretical, or based upon but small experience. I am very much more inclined to needle cases of immature cataract in people under forty years old, and follow with suction. I do not dread operating an immature cataract as I used to. Have no one method of operating or of capsulotomy; have had to do very few secondary operations. In a person who ages young, the lenses are older at forty than the average.

DR. LEWIS: An under-ripe lens contra-indicates the simple extraction; better make a reasonably large iridectomy and the Macewen method, or wash out the anterior chamber with warm saline. Neither is simple extraction indicated for over-ripe cataract. I have had several cases of glaucoma follow the secondary operation (needling), probably because I pulled on the suspensory ligament, or my needle was not sharp enough; I use one needle, a very sharp knife needle. Be careful in your prognosis of a very white milky hypermature cataract without the characteristic striation; it is apt to be followed by inflammatory trouble. Knapp has more corneal suppuration after the combined than after the simple operation. Of late years I rarely make the simple extraction; if there is prolapse the eye is very irritable, and there is danger on the day of second dressing of loss of vitreous from squeezing. I use formalin before opening the eyeball, yet with the combined method I have had suppurative keratitis twice.

G. A. SUFFA (Boston): In simple extraction I cut nearly one-eighth inch from the corneal margin; in the combined, very close. Is glaucoma less apt to follow the combined method? Two cases, combined extraction and needling, after four years each developed glaucoma. In dense capsules I often use two needles, crossing their points just beyond each other and bringing the handles together.

GEO. RHOADS (Springfield, Mass.): Lately I entered my knife backward; on discovering it, turned it in the wound, cutting the iris slightly, but have a good eye still.

DR. LEWIS: Knapp has done this four times; he turns the knife.

JOHN L. MOFFAT (Brooklyn): Of late years I make the simple

extraction, unless it is contra-indicated; my results average as well and, if anything, better than by the combined method. As instances of what the eye can stand: a number of years ago I pulled the suspensory ligament hard in discission of two tough capsules; two other patients accidentally struck the eyeball severely within a few days of the operation; fortunately none of these patients has ever developed glaucoma.

A. B. NORTON (New York): One or two years ago I favored the simple operation, but was led to a change of heart by Dr. Thomas, that it is one's duty to give the patient every chance for successful vision; but I never make my iridectomy at the time of the operation.

DR. FELLOWS: I always do. Patients want to get out in four days; many of my patients would not return for extraction.

DR. NORTON: Usually I make the extraction two weeks after recovering from the preliminary iridectomy. One nervous lady so squeezed the eye at the iridectomy that the eye would have been lost if the incision had been large. Heart and kidney troubles forbade general anæsthesia, so when the time came to operate I stupefied her with morphine [!] and cocainized the eye with success. I have no trouble in getting my patients to return for extraction.

W. W. BLAIR (Pittsburg), "Causes and Treatment of Retinal Hæmorrhages," recommended hamamelis, aconite, belladonna, phosphorus, rest in bed, protection from light; improve the general physical and mental condition.

DR. RHOADS: Frequent thorough urinalyses, careful examination of the heart, and blood counts should be made in all cases of retinal hæmorrhage.

DR. NORTON: I take issue with those who think there is not much that can be done for these cases. In one case of macular hæmorrhage under aurum muriaticum in potency the central scotoma entirely disappeared and vision returned to 15/15 inside of a year.

DR. SUFFA: A patient fifty-five years old suddenly lost vision by a macular hæmorrhage smaller than the disk; in the fall returned from summer vacation with good vision—under mercurius corrosivus.

DR. RUMSEY : In one case due to pernicious anæmia (blood count 2,000,000) iron was useless, but arsenic and protonuclein helped markedly ; the general condition improved, the spleen became smaller, blood count 3,000,000, and vision rose to 50/200 from 10/200.

DR. LEWIS : I have seen two cases of hæmorrhage in boys twelve and fifteen years old which seemed independent of any organic disease.

DR. BLAIR : A young man with a large macular hæmorrhage recovered almost 6/6 vision after about six weeks of kali muriaticum. Schmidt-Rimpler says these macular hæmorrhages are apt to be superficial, and may be more readily absorbed because there is less pressure over them.

J. IVIMEY DOWLING (Albany) reported, "Three Cases of Mastoid Disease." How should we aurists follow nature's methods in the ear? Perforation of the mt. is not always the path of least resistance for the pus, hence we should often perform paracentesis, if only for the tension of hyperæmia. Fresh pus coming into the external canal as fast as it is removed is an indication for the radical mastoid operation. His first case was successfully operated, apparently cured ; acute mania developed and culminated in suicide. Case II. The facial nerve was eaten almost through by necrosis ; left a facial paralysis. Case III. Boy aged three ; ac. ot. med. sup. following grip. After five days pus suddenly ceased. Mastoid swollen, fluctuation. A sinus and abscess curetted. Hearing as good as ever. The infection doubtless came through the Eustachian tube from or because of post-nasal adenoids.

A. G. WARNER (Brooklyn) : Local depletion, free drainage, and keeping the patient in bed, with medicines, will often obviate a mastoid operation.

DR. LEWIS : The mastoid operation is one of the most important of the last twenty years ; it is to be compared only to the appendix operation in importance. Its danger is increased greatly by diabetes.

DR. FELLOWS narrated a case of mastoid disease on both sides in a patient in the third week of typhoid fever, with 104°. Of course operation was impossible ; he leeches, gave capsicum,

belladonna, gelsemium, and the patient recovered. Probably there was no pus.

DR. DOWLING : I have aborted cases with homœopathic remedies, leeches, and the ice pack. A girl, aged twelve, an acute case ; the post-sup. wall of the canal protruded. Under ice and capsicum she recovered. No paracentesis, because there was so much swelling I couldn't introduce the knife.

W. C. COMSTOCK (Baltimore) presented, "Some Interesting Mastoid Cases." (1) A child, 2½ years old, tubercular, ot. med. pur., recurrent. Appears well after chiseling "healthy" bone and packing with iodoform gauze. (2) A man, aged fifty, died (a week after admission) in coma, following pains and delirium, of diffuse purulent lepto-meningitis of both sides and normal dura throughout. There were staphylococci in the pus (of ordinary Schwartze operation) and a lateral sinus thrombus,—dark clot, no pus,—which was opened and bled at both ends. No path for the infection was discovered ; it went probably by the fine blood or lymph vessels.

FREDERICK W. COLBURN (Boston) : The first case was rare in that the child had no tuberculosis anywhere else. The radical operation at once might have been better. (2) Morphine has no place in the treatment of ear disease. Operate if pain can't be controlled by heat, or especially by cold.

E. L. MANN (St. Paul) : It is the duty of otologists to educate the general practitioner on mastoiditis as the surgeons have educated him on appendicitis. The application of cold has never cured a mastoid case that could not have been cured by other means. It masks symptoms, and of course is ineffectual if pus has formed.

DR. DOWLING : The appendix is not similar ; it is surrounded by soft tissues where there is a good chance for protective adhesions. The mastoid cells are numerous and complicated ; a relapse is probable if pus is left in one cell. It is unjust to the patient to leave him in the hope that the pus will rather burrow through the hard process than through the softer and thinner tegmen.

W. W. IRVING (Milwaukee), "An Interesting Case of Glaucoma": 3 and 5 m.a. galvanism, positive electrode to eye and

negative to occiput, relieves the tension, improves vision and stops the pain in a minute or two. Has rheumatism and sciatica, hence it is doubtful if iridectomy or sclerotomy would cure.

G. F. BAGBY (Richmond, Va.) : The literature on electricity in glaucoma is very scant. We find similar interference with circulation in nearly all other organs where electricity has been found beneficial. Valude of Paris recently recommended a new method for glaucoma : Kathode large ; anode 2 c.m. x 8 c.m. to anterior border of the sterno-cleido-mastoid, 20 m.a., 20 volts, fifteen minutes every three days—aiming at the cervical sympathetic. This, if myotics have done all they could, should be tried before surgery.

DR. WOODWARD (Washington) : Valude also galvanizes the cervical sympathetic for goitre. I failed—with less current.

Monday Morning.

CHAS. DEADY (New York) advocated "The Necessity for Mydriatics in Correcting Refraction." With homatropin and cocain on Saturday business may be resumed Monday ; but most patients will put up with the more reliable cycloplegics. With mydriasis the patient should be tested through a stenopaic hole the size of his normal pupil. Tension should always first be taken. In eighteen years I have had T+ in only two or three cases, and these responded to eserine. Scopolamine has the least tendency to increase tension of any mydriatic ; its worst after-effect that I have ever met is a transient vertigo. Opticians claim that glasses can be correctly prescribed without a mydriatic. The amount of hypermetropia discovered is usually dependent upon the method of examination. Low degrees of ametropia cause more reflex trouble than do high degrees. Even when the patient is beyond middle age a cycloplegic is sometimes necessary to find the relieving glass. I rely upon the Harby ophthalmometer for the axis only, and that sometimes fails.

E. J. BISSELL (Rochester) : A diaphragm does not have the same effect as the iris. Let us be accurate and not speak of a drug as a mydriatic when referring to its use as a cycloplegic.

E. H. LINNELL (Norwich, Conn.) read his "Objections to

the Use of Mydriatics in Correcting Refraction." It should not be a routine practice.

DR. BLAIR: The multiplication of objective tests has not lessened the usefulness of cycloplegics. In 2550 patients I have not seen over a dozen affected by the drug; only one case could cause alarm, and that was not delirious. I have never seen glaucoma follow. In cases of strong resistance I suspect spasm, and therefore persist. The knowledge of the total refraction would not lead me to give too strong a glass. I caution my patients against eye-strain from too early use, and always order dark glasses during the mydriasis. I have not observed weakness of the extrinsic muscles follow. On the ground of thoroughness I heartily favor cycloplegia, even in some myopes (especially if they are under forty), and of course in all cases of hyperopia and astigmatia.

C. J. SWAN (Chicago) denounced scopolamin because of alarming effects in a little girl, of a $\frac{1}{2}$ gr. @ oz. solution: vertigo, busy mania, cyanosis. Other Chicago oculists at about the same time had bad effects; one man developed busy mania and wanted to fight.

H. D. SCHENCK (Brooklyn): At Atlantic City Dr. Boynton told us that he had discovered that some druggists substituted hyoscyamin for scopolamin; that was probably the case in Chicago.

W. R. KING (Washington): I do not use cycloplegics as a routine measure, but resort to them if not satisfied after two or three examinations and suitable homœopathic remedies. If I suspect hyperopia I give *ruta grav.* or *jaborandi*; in astigmatia, *jaborandi*, *physostigma*, maybe *belladonna*; in myopia, *physostigma*, maybe *belladonna*.

DR. SUFFA agreed with Drs. Linnell and King. He uses atropin more in myopia—especially of high degree—than in hyperopia, and corrects only the manifest error, changing the glasses as necessary.

E. H. BALDWIN (Newark, N. J.): How are we to know if a cycloplegic is needed in a given case? Note whether the patient selects his lens positively, especially the axis. Variation of axis during examination is a strong indication for a cycloplegic.

DR. ANDERSON : One trouble is that you have been using scopolamin too strong ; one-tenth per cent. is sufficient.

C. H. HELFRICH (New York) : Scopolamin should not be used in patients over thirty-five ; under that age I have never found trouble with it.

DR. RUMSEY : I use cycloplegics if I can't control the muscular error with the glass I prescribed. The greater my experience with refractive cases the less do I use cycloplegics. I find atropin the most reliable.

DR. MOFFAT : With a fresh one-tenth per cent. solution prepared by a reliable druggist, I have seen no ill effects from scopolamin.

J. A. CAMPBELL (St. Louis) : I use scopolamin only in one-tenth per cent., but always dissolve it myself ; have never had trouble. We must not ignore the possibility of the eye trouble being reflex ; in one obstinate case the eyes were cured only by curing a urethral stricture.

DR. JAMES : I never let the patient instill the drops at home.

DR. SCHENCK reported violent delirium for twelve hours in a woman from five-tenths per cent. scopolamin. I instill twenty-five-hundredths per cent. once, and get full effect in fifty to seventy-five minutes ; from this have had no more trouble than a slight vertigo. One of the most valuable features of prolonged cycloplegia is that the condition of the extrinsic muscles will often change—an exophoria becoming an esophoria. I have used atropin, 4 grs. @ oz., for several days before examination, with no bad effects.

F. H. BOYNTON (New York) : I have seen many cases of profound paralysis of the extremities under atropin. Sometimes the cycloplegic produces spasm. I have obtained no greater paralysis by continuing the drops for four days.

DR. LINNELL : I object to routine indiscriminate use of cycloplegics ; if we use them much we grow to rely less on the objective tests. I use cycloplegics more in myopes, especially young children ; prefer atropin, one per cent. Scopolamin is next to atropin in reliability ; I put a drop of one-tenth per cent. on the upper cornea four or five times in the office at ten-minute intervals.

In the majority of cases of astigmatism my results are the same after as before the cycloplegic. Exophoria (with ciliary spasm) is increased by the cycloplegic.

DR. LEWIS wrote on "The Importance of Frequent Examinations of the Eyes of Children." The eye muscles, like others, grow by use. In children under eight hyperopia is the rule: it sometimes might be outgrown if left uncorrected. Attention to heterophoria and the proper glasses may cure strabismus without operation. I have often relieved it in children with weak prisms with their edges toward the weak eye. Amblyopia is often cerebral, psychic, not ex anopsia—it does not change whether or not glasses are worn. Visual muscular inco-ordination, if the eye is healthy, may be relieved by careful training, visual, muscular, and psychical, of the child. Often the difficulties increase in geometrical ratio with the age. Examine for post-nasal adenoids, even if there is not mouth breathing. Obstructed lymph channels may be found connected with trophic neuroses.

G. D. HALLETT (New York): I don't see how heterophoria can be helped by a prism which calls for further effort of the weak muscle.

GEO. McDOWELL (New York): Dr. Lewis' cases may be thus relieved because they are really pseudo eso- or exophoria, from over-correction by the recti.

DR. FELLOWS: Especially for children the oculist should be largely a rhinologist.

DR. SHEPARD: We may find squint in myopic or emmetropic eyes. Many cases are due to oversensitiveness of the convergent center; a slight accommodative strain in general hyperæsthesia or mental strain might induce esophoria. A case of squint for thirty years preserved excellent vision.

DR. BOYNTON: Education of the squinting eye I have found to be a misfortune to the patient. Suppression of one image is nature's cure for troubles reflex from diplopia. Congenital defects may affect the length of the eyeball, and thence the relative lengths of the recti.

DR. LEWIS: I am talking of a weakened, not a lengthened, muscle, in children, not adults, and of course after focal cor-

rection. The exercise strengthens the weakened muscle by directing psychic energy to it. For an esophoria of 2° order for half an hour each morning a 1° prism, edge out; often there will be orthophoria after taking the prisms off. This rarely develops exophoria, unless worn for months. Watch closely, and change the strength of the prism as indicated.

GEO. A. SUFFA (Boston) read, "The Prescription of Glasses in the Various Errors of Refraction." Cycloplegia is requisite for retinoscopy and for ophthalmoscopy. Often we cannot focus on the macula, but that and not the disk gives the distance wanted. It is better to make the subjective tests first. We must not arbitrarily force total correction at once in cases which are helped by it. Meet the conditions as they change. Latent hyperopia is a protective provision of nature.

DR. KING : Make your diagnosis at once, and by exclusion. For verification by ophthalmoscopy I practically relax the patient's refraction by having him look through an opening in my dark room door at a distant object; I can relax most of my accommodation. An eye will not accept full correction of corneal astigmia. Correction of refraction early in life and careful watching afterward may result later in ametropia. I agree with Dr. Suffa in not forcing total correction.

DR. MOFFAT : Inspection and objective examination should come first, verified by the subjective tests. With the trial lenses I proceed from the strongest + or the weakest -; but with patience have often relaxed the ciliary muscle by beginning with the weakest positive glass. It is very exceptional that a moderate light in a dark room so dazzles or weakens the eye as to affect the test with letters and lines. We must not forget that combining lenses, in testing, places the nodal point farther from the eye than it will be with the prescribed glass. Coquilles and torics have great advantages : (1) toward the edge; the line of vision deviates less from the perpendicular to the glass (2) a larger field ; (3) less weight in the higher strengths.

C. J. SWAN (Chicago) read a paper on "The Priestly-Smith Method of Preparing Microscopic Eye-Specimens," and showed some mounts.

Monday Afternoon.

PRESIDENT THOS. L. SHEARER, of Baltimore, delivered his address, his theme being a higher standing for the medical specialist; there seems to be a tendency for specialties to degenerate the profession into a business. He urged us to give more attention to homœopathic prescribing and to the scientific development of our materia medica along the line of our specialties. Combination tablets and polypharmacy were condemned. The specialist must have a general experience, and be quick to recognize, or at least suspect, a remote cause of the local trouble; *e. g.*, the condition of the sexual organs may affect the nasal mucous membrane, the ocular muscles, etc.

ROY S. COPELAND (Ann Arbor) read a paper on "Hæmatology in its Relation to Ophthalmology, Illustrated by a Case of Optic Neuritis." It is an aid in distinguishing which diathesis underlies the ocular condition. In the case related there was found increase of leucocytes, but more markedly of polynuclear cells, hæmoglobin and the red corpuscles were decreased; these pointed to a tubercular origin.

C. J. SWAN (Chicago) did not consider the blood examination in that case was sufficiently indicative to be of much help in the diagnosis. He gave the following table:

	PHAGOCYTES	ANÆMIA	FIBRIN	LYMPHOCYTES
Syphilis		Marked	No increase	Relative and absolute increase
Tuberculosis	No measurable change	Apparently no increase	No increase	Normal or increased
Pus infection	Increased	Increase, if long continued	Increase	Decrease
Malignant growth	Increased	Increase, if long continued or in later stage	No increase	Decrease

Pure tuberculosis never gives lymphocytosis.

J. A. CAMPBELL (St. Louis), "Some Observations on the Treatment of Gonorrhœal Ophthalmia," detailed two cases in which nosophen powder applied to the ulceration every hour gave marked improvement in twenty-four hours.

DR. JAMES urged more close homœopathic prescribing in conjunction with the local applications, and mentioned the following remedies as beneficial in this class of cases : cannabis, cantharis, equisetum hyemale, eupatorium purpureum, petroselinum, conium maculatum, capsicum, copaiva, chimaphilla, erigeron, pulsatilla, ferrum phosphoricum.

DR. McDOWELL considers gonorrhœal ophthalmia a local infectious disease in which protargol is almost always a specific.

E. H. BALDWIN (Newark N. J.) : "A Case of Acute Retro-bulbar Neuritis, with Paresis of the External Rectus." An interesting case, treated for the first four months with belladonna and the subsequent four months with sulphur 30, one dose at three weeks' interval, gradual improvement resulting in restoration of sight sufficient to read a newspaper at ten inches.

ELLA G. HUNT (Cincinnati) : From the symptomatology she considered the case rather one of neurasthenia from overwork, and gave the following list of ætiological factors in the production of retro-bulbar neuritis : Cold, toxic agents, dilute hydrocyanic acid, antifebrin, antipyrine, intracranial hæmorrhage, embolism, albuminuria, diabetes, and influenza.

DR. BAGBY reported a peculiar case of optic neuritis accompanied by alopecia.

H. P. BELLOWS (Boston), "Some Observations in Foreign Clinics," was a description of the mastoid operation, with the sundry slight modifications made by the different representative operators on the Continent. As an anæsthetic chloroform was preferred everywhere, except in Berlin, where ether is the favorite. The instruments for aural massage being less delicate in manufacture, and far inferior to our American ones, while the results also do not come up to ours. The writer showed several new and delicate operative instruments, among which were Lutze's new pressure probe, a really aseptic ear syringe, and an incus hook. He recommended for applying heat: after rubbing or pulverizing salt well, place it in a bag and boil ; it retains its heat for two hours. He finished with a prediction that in a very few years America will be abreast, and even ahead, of the mother continent in respect to our specialties.

G. W. McDOWELL (New York) : "Occlusions and Strictures

of the Eustachian Tube." The causes are : (1) hypertrophic catarrh of the Eustachian tube ; (2) strictures, (*a*) osseous or (*b*) membranous. Osseous strictures are beyond our aid. The Eustachian bougie, with or without electrolysis, he considers the best method of treatment in chronic cases. Occasionally, when only the external end of the tube is constricted, the auscultation sound will seem normal; he therefore advised, for thorough diagnosis, that the bougie should be protruded into the middle to make sure of the condition. In hypertrophic catarrh he recommended local application of iodine and glycerine upon a bougie to the Eustachian membrane.

DR. LINNELL recommended hydrastis, mercurius, or kali internally, and iodine, hydrastis, or nirate of silver locally. Another spoke highly of the local use of iodide or carbonate of soda, grs. vj to the ounce.

J. W. JEWETT (New Haven) : "The Treatment of Catarrhal Deafness." Treat the cause. A very thorough consideration of the ætiology was given, and the method of remedying each causal factor. The pneumo-phono-massage was deemed the best local treatment. Hygienic measures were also fully dealt with. The internal medication was omitted on account of its voluminousness.

H. D. SCHENCK (Brooklyn) : "Some Observations upon Massage in Diseases of the Middle Ear." The writer used the Wapler pneumo-massage, alternating pressure and suction, followed by suction until there is congestion in the attic and along the manubrium ; then the pneumo-phono-massage for three to fifteen minutes, and the phono-massage for three to five minutes. The faradic current adds to the beneficial effect of the pneumo-phono-massage. Even in this manner treatment of tinnitus is disappointing. Treatments are given daily for two weeks, every second day for three weeks, and finally twice a week for two months.

J. H. BALL spoke highly of Wilson's vibrometer. F. de W. BATES emphasized the benefit of long-continued treatment, and cited cases. Dr. Schenck believes the combination of vibrometer with the pneumo-phono-massage the best.

E. E. KEELER (Syracuse) : "La Grippe with Special Reference to the Eye and Ear Complications." The most frequent com-

plications are otitis media suppurativa acuta, mastoiditis, dacryocystitis. In o. m. s. a. the use of hot water in a fountain douch was condemned.

J. B. GARRISON (New York) read a paper on "Medicinal Treatment of Hypertrophy of the Thyroid Gland."

JOHN L. MOFFAT: Dr. Garrison and his correspondents fail to mention three of the most important remedies for goitre: bromine, lapis albus, and fluoric acid. I have relived it with fucus vesiculosus. Dr. Allen T. Haight of Chicago reports success in treating exophthalmic goitre by repeatedly painting the enlarged thyroid with fresh collodion. This might prove serviceable for the hyperæmic or neurotic variety, but would not be tolerable or indeed safe in cases where the gland produces dyspnœa by its pressure upon the trachea. I hope that hereafter each of us will take pains to report his unsuccessful and successful goitre cases, noting especially their pathological variety in addition, and the other symptoms, thus contributing to the task of classifying our remedies according to the pathological varieties of goitre. I urge this for the better understanding of their action, not by any means as a substitute for or a short cut to covering "the totality of symptoms"—which is the only non-empirical way of curing this as yet obscure disease.

MR. M. R. HUTCHINSON, E. E., demonstrated his akoulalion, which is a table with an akouphone for the teacher and a separate one for each deaf mute, who can hear only the teacher and himself. A valuable and practical aid in teaching deaf mutes to hear and also to speak. He said that of five thousand deaf mutes only three per cent. were unable to distinguish p and m. Only eighty per cent. of the "totally deaf" can be helped; partly because from disuse of that faculty they cannot concentrate their attention, partly because they have lost the power of eliminating or disregarding extraneous sounds and echoes. The mute first distinguishes between longer and shorter sounds, then between the kinds of sounds, *e. g.*, p and m. The akouphone seems to be a modified, adjustable telephone, "the louder one speaks into it the lower is its tone," intensifying articulation more than loudness. Its vibrations are "saw toothed," very penetrating. It is worked with a light portable dry storage battery of three-ampere-

hours, that may be carried in a pocket, and is very good for cautery purposes.

Vibratory massage through the akouphone impressed us very unfavorably. It is harsh, sharp, and disagreeable. Two of us were decidedly deaf the day after trying it. Other massage instruments are preferable.

Tuesday Morning.

The following officers were elected unanimously: President, C. Gurnee Fellows (Chicago); first vice president, Geo. B. Rice (Boston); second vice president, C. L. Rumsey, Baltimore; secretary, H. D. Schenck (Brooklyn); treasurer, Geo. W. McDowell (New York); censors: J. N. Anderson (Toronto, Can.); G. F. Bagsby (Richmond, Va.); J. Ivimey Dowling (Albany, N. Y.); Ella G. Hunt (Cincinnati, O.); W. B. Kreider (Goshen, Ind.).

A. W. PALMER (New York): "The Ætiology and Pathology of Suppurative Disease of the Nasal Accessory Sinuses." See p. 247 of this issue.

G. B. RICE's (Boston): "Diagnosis of Suppurative Disease of the Nasal Accessory Sinuses" was a thorough, interesting paper, accompanied by seven illustrations, giving the presumptive, probable, and positive symptoms and diagnostic signs in a tabular form, similar to a table by Dr. Dundas Grant of London, which may be found in the April, 1899, issue of this JOURNAL. One of the newer modes of diagnosis is the relative length of sound of a tuning fork placed over the frontal and antral sinuses. Patient does not recognize it as long over a diseased sinus as over a normal one.

G. A. MÜLLER (Pittsburg): "The Treatment of Suppurative Disease of the Nasal Accessory Sinuses." This is removal of the cause by drainage of cavities, then follow by cleansing. For the antrum he advised Cooper's or Desault's operation; for the ethmoidal cells, curettage; for frontal, curettage from the nares, and Caldwell-Lues external operation. For cleansing he advises against the use of H_2O_2 or pyrozone, because it may spread disease from one sinus to another; he usually employs some mild alkaline solution, or a two per cent. to four per cent. solution of protargol. He finds aristol, nosophen, iodoform, etc., beneficial.

D. A. MACLACHLAN (Ann Arbor) reported a case of sphenoidal disease cured by enlargement of natural opening and cleansing with hydrastis and calendula followed by antinosene ; he also advocated hygienic, constitutional, and homœopathic remedial treatment. Dr. Palmer called attention to the drill and chisel he specially devised for frontal operations. Dr. Anderson recommended the suction action of the Wappler machine very highly, both for diagnosis and treatment. Dr. Rice reported an interesting case of apparent frontal disease which upon microscopical examination proved to be an alveolar sarcoma of the roof of the antrum and of the malar bone.

The paper on "Chronic Suppuration in the Nasal Accessory Sinuses, with Special Reference to Frontal Ethmoidal and Sphenoidal Sinusitis," by Dudley Wright, F. R. C. S. (London), (read by the secretary), was a long and very instructive collection of the writer's own observations and conclusions ; he differs with many generally accepted ideas and gives good reasons. He relies greatly upon subjective symptoms.

WM. M. STEARNS (Chicago) considers poor nourishment and scrofula responsible for very many cases of this disease ; does not believe in the sinus origin of ozæna, because of its occurrence in infancy and the difference of the characteristic odor.

DR. JAMES advocated homœopathic treatment.

E. B. HOOKER (Hartford) : "Nasal Polypi." Advocated "the intelligent use of the cold wire snare and subsequent treatment with electrolysis." The writer decried the use of cautery on account of cases of blindness which have occasionally occurred from such treatment. We too frequently forget after removal of these tumors to tone up our patients, *e. g.*, cold baths, etc., and see to it that they are hygienically clothed.

DR. RICE thinks the principal cause ethmoidal disease ; more attention should be given to this condition. He reported a case that he believed was cured by *mur. ac.* 3.

DR. BATES spoke highly of *teucrium marum verum*.

O. L. SMITH's paper, "Acute Post-Nasal Tonsillitis," was a report of two cases of what is usually called acute naso-pharyngitis or acute adenoiditis.

DR. PALMER remarked that the reason these cases were not more frequently diagnosed was because they usually go to the general practitioner, who at present seldom takes the time to ascertain the exact cause of an acute sore throat which can be relieved in a few days with medicine or a simple gargle or spray.

Tuesday Afternoon.

J. T. O'CONNOR (New York): "A Remedy in Ménière's Syndrome." A female who had used quinine for thirty years had tinnitus, vertigo, and deafness for all sounds except bells. Because chenopodium has the symptom, "great sensitiveness to bells," and the writer had ascertained that the proving was made with chenopodium cum terebinth; this combination was administered, and a cure resulted.

J. M. FAWCETT (Wheeling, W. Va.) also reported a similar case, which was relieved. DR. HELFRICH has found this drug beneficial in ot. med. cat. when the higher notes are disagreeable.

J. T. O'CONNOR: The chenopodium patient is too deaf to hear the voice, yet is startled by the tinkling of a bell downstairs. He, or she, may fall from sudden vertigo, with the sense of having received a blow. In Ménière's own case there was hæmorrhage in the internal ear. In this disease the hæmorrhage may occur in the medulla or cerebellum. The object of my paper is to start investigation of what portion of the tract is especially affected by this combination of chenopodium cum terebinth.

ISAAC C. SOULÉ (Kansas City): "An Unidentified Condition of the Fundus Oculi" was then read.

DR. HELFRICH: This was probably a case of retinitis albescens punctata; unfortunately the visual field was not taken, and there is no report as to the presence or absence of day-blindness, etc. In this disease central vision is affected, but not peripheral vision; these cases may be congenital, or occur in very young children. The spots never coalesce; the colloid changes do not effect vision.

W. M. STEARNS: "A Case of Aortic Aneurism Affecting the Larynx, Trachea, and Œsophagus:"

For two or three years the pulse on the left side, radial, subclavian, and carotid, was very small, and there was pallor. The

writer was called for a violent, dry, irritable laryngeal cough and aphonia. The left recurrent laryngeal nerve was paralyzed, as was the left vocal chord ; the latter was no more congested than we would expect from such a cough. Aneurism of the aorta was diagnosed, and confirmed by auscultation ; the aneurismal sounds under the stethoscope were decided, but much fainter than usual. Death occurred, as anticipated, by rupture into the trachea.

In a second case Dr. Stearns was requested to dilate an œsophageal stricture with a bougie ; he applied the stethoscope, and declined, lest he rupture an aneurism. A fortnight later another doctor passed a bougie, and the patient died in an hour, probably from pressure on the heart by rupture of an aneurism into the mediastinum.

DR. GARRISON : One lesson from these cases is the danger of our confining ourselves to our specialty ; the throat cough was explained by examination of the chest.

G. D. HALLETT read: " The Value of Retinoscopy over Ophthalmometry." With Norris and Oliver and Thorington he holds retinoscopy superior to ophthalmometry. Practice enables one to recognize smaller degrees of astigmatism with it than with the ophthalmoscope or ophthalmometer.

R. S. COPELAND agreed. The axis found by ophthalmometry is confirmed by other means in seventy-five per cent. of my cases ; in only about fifty per cent. is the refraction confirmed. There are exceptions to the laws of ophthalmometry and of retinoscopy just as there are to those of grammar.

DR. SHEPARD : The more I use retinoscopy the more convinced I am of its great value. I usually have the patient look through a window or opening in my dark room over my shoulder to an object more than twenty feet distant. The plane mirror gives a better reflex, but the axis is more difficult to locate. I believe in cycloplegics, but in many cases I must get along without one—then I confirm with the text card. In the majority of cases I deduct 1 D. to 1.25 D. with the concave mirror ; with the plane mirror I deduct from 0.75 D. to 1 D. For years I have used retinoscopy in every case.

DR. SUFFA : I deduct from 0.50 D. to 1.50 D. If we reverse

at one meter we should deduct 1 D. I do not use retinoscopy so much, because I do not use cycloplegics as a routine measure. The concave and plane mirror give different results in the same case.

DR. HELFRICH: This variation arises from the distances at which we test. I prefer the plane mirror, because I can sit farther away, where a variation of three inches in the position of my head causes a smaller error. (I think Jackson more masterly and better to follow than Thorington.) We should be far from the patient, and have the light near the mirror. Retinoscopy is a better estimation than is the direct examination, especially in young children. Few or none of us can absolutely do away with all our accommodation, unless we are so old we have none left. With the plane mirror and the shaded light near it, we can estimate the refraction within 0.25 D.

J. B. GARRISON read a paper on "Exophthalmic Goitre." JOHN L. MOFFAT noted the omission, among the remedies, of fluoric acid, fucus vesic., lapis alb. and bromine.

DR. COPELAND: I cannot disassociate goitre from exophthalmic goitre; I believe it is a nervous disease. Sulphur is the homœopathic remedy; it has in its pathogenesis the irritable heart, tachycardia, localized sweats, falling of the hair, and enlarged glands—but not exophthalmos. A dose of sulphur 30 every night I have known to cure. Spartein sulphate might prove useful.

W. E. DEUEL (Chittenango, N. Y.): Enlarged thyroid has been endemic in a little town of nine hundred in a small valley in my section of the country; fifty per cent. of the young ladies are affected. I put them on distilled or rain-water with spongia 3, or calcarea iodata 6. One case married after she was supposed to be cured, and with each pregnancy the gland enlarges; I finally cured (?) her by pushing iodide of potash.

DR. BALL: I cured a case four years ago with sulphur 6 given intermittently for a year.

DR. MCDOWELL: W. H. Thompson of New York thinks goitre due to ptomaine poisoning from a meat diet. Some cases improved on a milk diet; others died after cutting off all meat.

J. L. M. and A. W. P.

AMERICAN INSTITUTE OF HOMŒOPATHY—SECTION IN OPHTHALMOLOGY, OTOTOLOGY, AND LARYNGOLOGY, RICHFIELD SPRINGS, N. Y., JUNE 19, 1901.

The following papers were presented : "Extra-Aural Diseases," by E. J. Bissell (see p. 241, this issue). "Extra-Nasal Diseases of the Nose," by A. Worrall Palmer (see p. 247, this issue) and those below.

Dr. Geo. B. Rice promised us his paper, "Malignant Diseases of the Nasal Accessory Cavities," and Dr. George Royal his "Homœopathic Treatment of Diseases of the Air Cavities of the Head," but the MSS. have not arrived at time of going to press, much to our regret.

H. F. BIGGAR : My topic, *Localization of Septic Foci in the Brain*, is practically the same as abscess of the brain. This condition may occur from very various causes ; one of these is traumatic, and in such case it is localized at the point of injury, or it may be on the opposite side of the brain.

Fracture of the skull may occur at the point of injury ; also when the force is transmitted through the whole body—as when the patient has fallen from a height directly on his feet producing fracture of the base of the skull ; or through the mouth. In Cleveland we had some litigation on a point similar to that, where a bullet struck at an angle of 35° with such force as to raise up the calvarium and stretch the ligaments by which it is attached to the spine, and thus fracture the base of the skull. I have been investigating that matter to see if this could be possible. I stated the case at a medical meeting, and a doctor there said that he had seen that very thing.

The infection may be from within or it may be from without. When from within, the majority of cases are associated with mastoid suppuration of the temporal bone. Infection has spread to the sinuses, and even broken through to the jugular vein. If from without, it may be from the lungs or from a pyæmic condition of any part of the body, or an atheromatous condition of the arteries may be the source of the infection. By all of these methods infection of the brain may be produced. I remember a case in which anæmia acted as a contributory cause. Also there comes to mind a case which proved to be a case of abscess of

the brain, about which there was associated no prominent symptoms of abscess of the brain.

A patient may be affected with such a trouble, and yet go around for years with few if any symptoms of it, the abscess being in that part of the brain which is not expressed in localization by symptoms ; it may have no connection or exert any pressure upon any nerve trunk at all. Such a case may die very suddenly through the bursting of the abscess, die instantly and we not know what the cause of his death really is. It is frequently put down to heart disease, without any basis for it except the suddenness.

A married lady came under my care who had twice been pregnant, and each time with very grave symptoms ; indeed, she had been brought to death's door by obstinate nausea and vomiting. We could find nothing that would stop that terrible vomiting. She became pregnant the third time, and she wanted her baby very much indeed. She was then in Washington. She went to Boston, and while there consulted an old-school physician, who told her that it was impossible to go on with her pregnancy, and therefore cleaned out the uterus. He curetted the womb three times in ten days. Still sick, she returned to Cleveland. I examined her, and of course did not think that she could be still pregnant after all those curettings. I put her to bed. And I asked myself, What is the matter with this patient? Can this be reflex vomiting, or is something like a tumor or abscess of the brain the trouble? Some three weeks later I examined the womb again, and now I made out that she was pregnant, which I was not able to do before. So I called in an able obstetrician. It was his opinion that nothing would stop that vomiting but an induced labor, to rid the uterus of its burden. So a string of iodoform gauze was inserted into the uterus, and in twelve hours the fetus came away ; the placenta also came away, and still that vomiting kept up, until she died. I had specialists there of all kinds : there was nothing the matter with her eyes, there was nothing to be detected in the urine. We examined her blood, and nothing of an explanatory character was found ; nothing seemed to be the matter, and yet the woman, who was only thirty-eight years of age, went down to death, and I really do not know what killed her. Some said it was basilar congestion from the strain of

vomiting, and not a septic condition. A post-mortem was not allowed; I strove for it in vain. We had a consultation of doctors after the death of that woman to see if we could arrive at a satisfactory conclusion of the cause: there were the charts, there were the records, of the blood, of the urine, and of the temperature—which had been subnormal. The opinion of the majority seemed to be that the woman had died of chronic nephritis. These doctors were not poor ones, remember, they were specialists in their several lines. It is only proper to mention that nine months before this she had had a fall down stairs and had severe frontal headache afterward, and a tendency to wavering in her walk. There may have been an exudation in her brain; I am rather inclined to that opinion myself. When you have these symptoms, vomiting of a very persistent character combined with intense headache and blindness,—I forgot to mention that she became blind shortly before she died, without the eye showing any ophthalmoscopic changes,—I repeat that those three symptoms turn the scale toward a diagnosis of brain exudate. The blindness came gradually for three weeks before her death, and just before death she became perfectly blind.

There are four parts of the brain, which it is well to bear in mind, as having a diagnostic value as to localization: the prefrontal, the central, the parietal, and the occipital portion. In addition to these we have the cerebellar part, the temporal part, the pons and the medulla oblongata. You may have a train of symptoms following from an affection of each one of these parts, and you will be able to diagnose just exactly where the lesion is.

In the prefrontal part you get: mental dullness and irritability, childishness, lack of power to concentrate the attention, and the eye shows retinal congestion. Hysteria and loss of the sense of smell are two features that also belong to this region.

In the parietal part, muscular anæsthesia, aphasia, and loss of memory.

In the central part you get: local spasms or paralyzes, epilepsy, palsies limited to some special part. Also agraphia, or inability to express ideas in writing, muscular anæsthesia, and loss of memory.

In the occipital part you get: changes in the special sense of sight, gradual blindness, and loss of memory for words.

In the temporal part you get: blindness, word deafness, and hysteria.

In the cerebellar part you get: ataxia, vertigo, muscular in-co-ordination, vomiting, and intense headache.

The pons and the medulla we divide into three subdivisions: the upper, the lower, and the middle. In the first part you get: crossed paralysis of the third nerve, of the fourth nerve, and of the limbs.

In the middle part you get crossed paralysis of the fifth nerve and limbs.

In the lower part you get crossed paralysis of the tongue, through the hypoglossal and the limbs.

With these facts clearly before us we can do much to locate the position of the lesion, while without them we cannot make much out of it.

A point requiring the most calm and impartial judgment is when to operate and where to operate; you have made your localization, now come the questions: *When* shall we operate, and *where* shall we get the pus?

There was an address by Dr. Balatz, recently published in the London *Lancet* upon this very question of when to operate and where, in which you will find a review of the whole subject, containing some very valuable points.

The temporo-sphenoidal region is the most often affected of all others, and the most important in making measurements. If you take a line from the middle of the external meatus and extend it forward to the external orbital fissure, you will have a very important landmark called Reed's line.

One and three-quarter inches above the external auditory meatus and one and one-quarter inches behind will give you the location of the temporo-sphenoidal lobe.

The anterior surface of the petrous bone is seven-eighths of an inch above the middle of the meatus.

The mastoid cells are half an inch behind and quarter of an inch above this line.

Cerebellar abscess you would get one and one-half inches behind and quarter of an inch below; but Birmingham says two inches behind and one inch below, in order to avoid the sinus.

In cases of mastoid disease I have found it beneficial to employ two forms of treatment in the early stage to relieve the

congestion and prevent the formation of pus: (1) the application of leeches to the back of the ear very quickly relieves the most intense pain ; (2) the use of ice. Now I know that there will be great objection to this, particularly on the part of those doctors who have not had the benefit of hospital experience. You dare not do it in the country, or in many homes in the city, because you cannot count on the incessant intelligent nursing or on the necessary appliances. In such circumstances I have had to put on hot applications, when if the patient had been in a hospital I would certainly have used ice, for I greatly prefer ice to hot water when pus has not yet formed but we fear it will form.

O. S. RUNNELS: I once had a case that is of interest in connection with this subject, and illustrates the possibility of making a mistake in diagnosis, notwithstanding the greatest care and time spent in the consideration of it.

The patient, an army surgeon, was riding in company with an unpopular Indian agent near a corral where they were killing cattle. The surgeon all at once felt something trickling down his face. He was not conscious of being shot. Putting his fingers up he found that it was blood, and said: "I have been shot." He was taken to another post about sixty miles away, becoming unconscious before he got there. While they were probing for the bullet, he came to and said: "What are you probing in my brain for? I will thank you to get out of it." The bullet was left in his head, as was supposed, and he made a partial recovery. He came to my town to live, and fell into my hands. He had various brain symptoms during this time, gradually growing worse. The orifice never entirely closed up ; and he carried a wad of cotton in it. He lived fifteen months after the injury, and died with signs of extensive softening of the brain. I held a post-mortem, and of course expected to find the bullet in his brain, but the bullet was not there ; I made an exhaustive search. The bullet had broken both tables of the skull, and done some damage to the meninges ; there was necrosis of the brain tissue for about two inches around the site of injury. The brain substance had simply died from the shock and succussion of the blow. There was absolutely nothing abnormal anywhere else in the brain. The symptoms during the time that I had the care of him were a gradually increasing paralysis and loss of mental faculties.

Diagnostic Value of Leucocytosis in Septico-pyæmia, by Charles E. Kahlke, Chicago.

Although I have used the blood examination very extensively during the past five years as an aid to diagnosis, I do not feel that a paper from me on the subject can be of any special value, for I consider efficient work in this line can be done only by an expert. The general practitioner or surgeon may never ignore the eye in his general examination, though he is not in a position to write an exhaustive, scientific, or practical review in this domain; so in the case of the blood, under certain conditions we expect to find certain changes.

In January of this year one of my little patients, three years of age, made a fairly good recovery from a light attack of bronchitis and rheumatism. A few days later his temperature suddenly shot up to 105°, pulse to 160, and respiration from 24 to 38. The little cough that remained was not especially aggravated. Though the child was at times slightly delirious, he had no marked subjective symptoms. Pneumonia was of course suspected, but repeated physical examinations revealed nothing of this nature. The second twenty-four hours found the patient in the same condition. Because of the frequency of otitis in youngsters, I questioned him closely concerning pain in or about his ears. His answers were always negative. No tenderness could be found on pressure. Being thoroughly alarmed, I made a Widal test for typhoid, but found it negative. An examination for malarial plasmodia was likewise negative.

The positive blood findings, however, were a polymorphonuclear leucocytosis and increased fibrin. This, under the circumstances, pointed to either pus or pneumonia. As I was positive no pneumonia existed, I called Dr. Fellows in for the purpose of exploring the sinuses and cavities about the head. He found the left ear drum decidedly congested, but thought it did not have the boggy appearance of a pus drum. Nevertheless, with the negative results of a general physical examination, and the positive findings in the blood and ear, puncture of the drum membrane was indicated, and performed at the end of the second twenty-four hours. The puncture was followed by the escape of a small amount of turbid serum, from which a smear and tube inoculation were at once made. Both revealed staphy-

lococcus pyogenes aureus. During the two hours following the puncture the temperature dropped from 105° to 102° . In the next twelve hours it came to 99° , never to rise again.

Here was a serious case, practically without objective and with no important subjective findings, cleared up by blood examination.

As a blood examination should be simply a part of a general examination, leucocytosis amounts to nothing more than a symptom, like pain, etc. It is part of the whole, having its own, but limited, significance. It is so widely influenced too, in an indirect way, that one has to be an expert in blood examination to fully appreciate its meaning. One should know, too, that it is found physiologically as well as pathologically.

Leucocytosis is valuable in making a differential diagnosis between suppurative and non-suppurative inflammation. It is of special value to you O. and O. men, because purulent accumulations in the cerebral sinuses following middle ear disease are to be suspected at times only by the blood count. While a leucocytosis points to the presence of certain infections, such as pus and pneumonia, it likewise points to the absence of others, such as typhoid, malaria, influenza, tuberculosis, etc., unless they are complicated by pus formation. It is found in all degrees, but is greatest in all pyogenic infections; especially abscesses, and gangrenous inflammation, and pneumonia. The leucocytosis found in septico-pyæmia is generally polynuclear, with neutrophile granulations. Its diagnostic value is, however, sometimes overestimated or wrongly interpreted, because small foci of suppuration in the body, not at all connected with an existing disease, may give rise to it.

I once had a beautiful case of septico-pyæmia where the original focus happened to be a small central abscess in the liver, which latter, however, could not be diagnosed during life. The case presented a typical picture of malaria with regularly recurring daily chills, fever, and sweats, and until late in the disease there were no signs of anything like pyæmic abscesses of any size. Although the case had been treated by one of our old-school profession for two weeks as a case of malaria, I made a diagnosis of sepsis on the ground of the leucocytosis present. The post-mortem revealed the true nature of the case.

The following I wish to quote from the "International Text-

Book of Surgery": "Almost all acute and subacute suppurative processes manifest themselves in the peripheral blood by an increase in the number of polymorphonuclear leucocytes.

"1. The degree of leucocytosis is independent of the amount of pus. A felon or empyæma, for instance, may give rise to the same degree of leucocytosis.

"2. The increasing leucocytosis may mean spreading of the disease; hence, a daily chart is better than a single count.

"3. Leucocytosis is occasionally absent even though there is a great amount of pus. This condition may mean (a) that the bacteria in the pus are dead; (b) that the pus is thoroughly walled off, and (c) that the case is one of those fulminating varieties of great severity."

Generalizing we would say:

First: The mildest and severest inflammations of pyogenic origin produce no leucocytosis.

Second: That the vast majority of cases of pyogenic origin present leucocytosis. (Over ninety per cent.)

Third: After thorough drainage leucocytosis drops.

Fourth: We have the greatest leucocytosis where the most virulent inflammation is well resisted.

Extra-ocular Eye Disease, by Jas. A. Campbell, St. Louis.

The intimate blending and complex intertwining of the functional and vital machinery of the human body cannot be better illustrated than under the above title; for the eye may be and is often involved in morbid processes originating external to and remote from the eye itself.

This influence may be organic, functional, or optical.

Organic, when the organic eye becomes secondarily involved in general constitutional disorders, as in albuminuria, diabetes mellitus, syphilis, tuberculosis, embolism from endocarditis, etc.

Functional, as seen in reflex neuroses caused by nasal or dental troubles, or associated with disorders of the generative system; nerve irritation from mechanical pressure from tumor growths or foreign bodies in the brain or orbital cavity. Likewise when produced by spinal disease, especially in the cilio-spinal region; or when irritation or paresis of the sympathetic nerve causes increased or diminished eyeball tension, and again in the general nervous phenomena known as exophthalmic goitre.

Optical, when disturbed functional activity results in a thinning of the posterior or anterior eyeball tissues, resulting in an increased antero-posterior eyeball diameter ; progressive myopia in the first case and possibly progressive astigmia. Also when lessened nerve tone decreases the range of the accommodative power, as well as disturbs the muscular equilibrium of the external eye muscles.

To the oculist the above brief *résumé* will be only an oft-told tale ; but to the general practitioner the lesson it offers cannot be overestimated, for in many cases correct diagnosis, treatment, and prognosis can only be reached by the proper consideration, understanding, and interpretation of these extra-ocular eye disease symptoms.

CHAS. GATCHELL : In discussing the subject of *exophthalmos* and its interpretation, it is best for me to confine myself to that form of the affection which occurs as one of the cardinal symptoms of Graves' disease. Protrusion of the eyeball in other diseased conditions is, as pointed out in Dr. Campbell's very lucid paper, readily explainable. Such protrusion as he instances may be due to orbital neoplasm, to aneurism, to abscess, or to other local deformity. But as one of the manifestations of Graves' disease it is a condition which has been much discussed and variously viewed by many of the foremost physicians of the world.

In introducing the subject Gowers begins with the statement ; " The prominence of the eyeballs is very difficult to explain." As explanations that have been offered he then enumerates : (1) increased orbital fat ; (2) distention of the orbital vessels ; (3) contraction of the fibers of Müller.

In approaching the subject of *exophthalmos* as occurring in Graves' disease, I shall assume that the general systemic condition is essentially nervous in its origin ; or, as expressed by Putnam, that behind or in conjunction with the disease of the thyroid there is some special susceptibility on the part of the nervous system. The special form of nervous derangement may be the "fright-complex" of Mackenzie, or it may be that form which appeals very strongly to my mind, and which is, I think, worthy of universal acceptance, the *psychopathia sexualis*, as set forth by Dr. F. Park Lewis in the paper read before the last meeting of the Western New York Homœopathic Medical Society. Taking

this, therefore, as our point of departure, how is the condition of exophthalmos brought about, and what is its nature ?

That the protrusion of the globe is actual and not merely apparent needs no discussion. True, there may be a staring appearance due to retraction of the lid without protrusion of the ball, as occurs with Stellwag's sign, which is caused by contraction of the fibers of Müller. But that this is not the chief cause of the exophthalmos is evidenced by the fact that if it were the two symptoms should correspond in degree, which, however, is far from being the case. We know, moreover, that in some cases the eyeball has actually been dislocated from its orbit.

In attempting to account for the protrusion of the globe it is necessary to recognize its two stages ; that is, the transitory and the permanent exophthalmos. It is well known that the prominence of the eyeball when this symptom first makes its appearance in the course of Graves' disease may come on suddenly, remain for but a brief period, and subside as rapidly as it came. Such rapid appearance and disappearance of the symptom points to but one cause, which is that it is due to congestion of the retro-ocular vessels. This explanation is reinforced by the fact that similar vaso-motor phenomena take place in other parts of the body. Graves himself accounted for the enlargement of the thyroid as being due to a condition of erection.

But in the end the prominence of the globe becomes permanent. This must be differently accounted for. The vascular congestion, when it occurs, is accompanied by more or less infiltration, and as a result the affected tissues finally undergo changes according to the general law of pathology that increased blood-supply eventually results in increased growth ; therefore, the retro-ocular tissues hypertrophy. There is infiltration of various forms, including the deposit of fat. This hypertrophied mass forms a cushion upon which rests the now protruberant globe.

The nature of the exophthalmos is, I think, thus accounted for. The interpretation of the symptom is another matter. In again surveying the field of medical literature devoted to this subject, my mind recurs to the explanation already referred to as being the genetical factor of the systemic disease itself, and that is, that it is a *psvchopathia sexualis*. In this view of the case

the interpretation of the symptom under consideration would, in a few words, be thus expressed : The psychopathia, as one of its essential features, is attended by repeated and long-continued congestion of the retro-orbital vessels. This is the interpretation of the exophthalmos. That the exophthalmos in the end becomes permanent is but an expression of the pathological law that increased blood-supply is always attended by increased growth ; hence the establishment of the condition.

If what I have offered be not the true interpretation of exophthalmos, then must we fall back upon the very conservative conclusion of Putnam that the real explanation of the specific signs of Graves' disease is probably far more subtle than our conceptions now can fathom. But I trust that it is not necessary so to do.

Brain Tumors and Their Ocular Diagnosis, by Clarence Bartlett, Philadelphia.

In opening the discussion on ophthalmic diagnosis of brain tumors, I would say that ocular symptoms, if optic neuritis be excluded, play but a subordinate part in enabling one to recognize the presence of a cerebral tumor. They must be regarded simply as focal symptoms, indicating merely that there is present some lesion capable of disturbing the sensory or motor function of the eyes. To enable one to say positively what that lesion is, he must rely upon the history of the case and the associated phenomena.

Taking the innumerable cases of ocular palsies which one meets in practice, but a very small percentage are dependent upon intracranial growths. Of the ocular palsies it is my custom to regard them as practically always of syphilitic origin. Of course this statement is rather sweeping, but nevertheless I believe that its regular acceptance will prove a good working rule of practice. Sometimes the syphilitic lesion may be a gumma, but the majority will be found to be inflammatory in origin. I suppose that I have seen probably twelve or fourteen cases of hemianopsia, of which but one was dependent upon a tumor. To repeat, then, ocular symptoms, optic neuritis excepted, indicate the presence of local lesion, the association of symptoms and their progress serving to still better fix the topographical diagnosis.

Intracranial tumors act by destruction and irritation to produce symptoms referred directly to their location. Furthermore, by reason of their mechanical effect upon the brain generally, they produce disturbed functions in distant parts.

Thus originate two classes of symptoms, the presence of both of which is necessary before the diagnosis of intracranial tumor can be established. The local symptoms differ in no respect from those produced by any lesion in the same locality. The diffuse symptoms in their typical grouping and progress are characteristic. At the same time, it must be remembered that these diffuse symptoms are in no sense pathognomonic, for they may originate from abscesses of the brain and occasionally from meningitis.

The special diffuse symptoms upon which we are accustomed to rely include headache, vertigo, general convulsions, and last, but by no means least, double optic neuritis. In the symptom last mentioned we find our main diagnostic reliance in cases of suspected brain tumor. Nevertheless too much importance must not be attached to it. Notwithstanding that nearly all cases of double optic neuritis are the result of brain tumor, yet there are many cases of this lesion in which optic neuritis is absent throughout the clinical course. It may appear early in some cases, and late in others. It may appear, continue for awhile, and disappear while the neoplasm pursues its course unchecked by treatment. There is no doubt that in many instances its presence is overlooked, for it not infrequently happens that vision retains its normal standard until the stage of secondary atrophy is reached. It must be remembered, moreover, that no symptom of brain tumor pursues a more uncertain course than does this one. Usually it is of gradual onset and slow progress; and yet it may appear with remarkable suddenness, reaching its acme within a few days after an ophthalmoscopic examination has stated the fundus oculi to be normal. It is especially liable to occur in association with tumors of the base, practically all cases of tumors in this locality being so associated. With tumors of the convexity it is different. Here probably not more than forty per cent. of the cases give no ophthalmoscopic symptoms.

I have seen but one case of cerebral abscess in which the symptoms are perplexingly similar to those of brain tumor. In

that one there was Jacksonian epilepsy, severe headaches, and double optic neuritis. The diagnosis of brain tumor would have been clear but for the history of an infected wound of the scalp several months before, the symptoms appearing within two weeks after the injury. The relationship between scalp infection and the resulting symptoms suggested a diagnosis of abscess, which was confirmed at the operation.

Ordinarily the diagnosis of optic neuritis in a patient presenting cerebral symptoms is not a difficult matter. That it may be so, is well illustrated by a case which I saw many years ago, and to which I have had occasion to refer on numerous occasions. The patient undoubtedly had contracted kidney. Her main symptoms were headache and typical Jacksonian epilepsy. The ophthalmoscope showed what at first appeared to be a typical optic neuritis, but which more deliberate examination suggested might be the neuritic variety of retinitis albuminurica. The patient died. The autopsy showed nothing abnormal in the brain beyond a remarkably extensive atheroma of the arteries. The kidneys, as was expected, were in an advanced stage of interstitial change.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION ; TWENTY-THIRD ANNUAL CONGRESS, MAY 27, AT NEW HAVEN, CONN.

The president's address, by HENRY L. SWAIN, of New Haven, was on "Laryngology and Its Place in Medicine." After a *résumé*, the latter part of his address was devoted to educational qualifications of medical men. He advises teaching by the academic method of electives, in the direct lines of the specialties. He would give the minimum time limit in which to prepare for an examination, and make that examination severe and final. He would devote a part of the course to the teaching of all the branches, and the remainder to the line of specialties.

JONATHAN WRIGHT, of Brooklyn : "A Leaf from the Ancient History of the Anatomy of Nasal Catarrh." On a tablet found in the tomb of an Egyptian king who died 3500 B. C. it is plainly stated that the "king had his nose cured." The ancient theory that there were four vessels in the two nostrils, two to carry blood and two to carry mucus, was held with more or less tenacity until, in the middle of the seventeenth century, Schneider published his work, which made great advances and is the foundation of our present knowledge.

A. COOLIDGE, Jr., of Boston read a paper on "Asymmetry of the Nasal Cavities." This condition is so common in this community that it might be considered the rule and not the exception. The causes come under three heads: First, that the deviation of the septum is primary and that the accompanying changes in the turbinates are due either to the inspired air current, or to pressure on the turbinate; second, that deviations of the septum are secondary, caused by a primary change in the shape of the turbinates; and third, that both the deflected septum and the asymmetrical turbinates and outer wall are due to a common asymmetrical development. The writer believes that in cases of deviation of the septum the common asymmetries of the other intra-nasal structures should be classed as physiological compensatory changes. Whatever may be the mechanism which underlies this adjustment, the ethmoid and the turbinates are especially endowed with nutritive adaptability, and in consequence are able to minimize the disturbance which a deflected septum would produce. Slight deflections are often rendered entirely innocuous, more extensive ones partially so. The entrance to the nasal cavities proper cannot share in this readjustment, and here a deflection of the cartilage of the septum cannot become obstructive.

JOHN O. ROE of Rochester then read a paper on "Epileptiform Convulsions Frequently Caused by Intra-nasal Disease." After a short *résumé* of the history of epilepsy, he reported several cases under his own observation, in which, after relieving the diseased intra-nasal conditions, the seizures were entirely stopped. One little girl, sick over five years, had from five or six to as many as thirty or forty convulsions during each twenty-four hours. The nasal passages were found to be almost completely occluded by very large inferior and middle turbinates, with very marked intra-nasal pressure in the ethmoid region, particularly on the right side. She had enlarged and diseased tonsils, and the posterior nares were filled with adenoids. The adenoids were first removed, which at once reduced the seizures to one or two very slight ones a day. The inferior turbinates were then cauterized with linear incisions, to remove the extreme vascularity. Five months ago a considerable quantity of osseous infiltration was removed from the ethmoid region, which has been followed by cessation of the attacks, and general improvement in every way.

ARTHUR AMES BLISS of Philadelphia read a paper on "Harrison Allen's Supra-labial Operation for Deflection of the Nasal Septum." The cases peculiarly adapted to this operation are those in which there is a straight or but slightly curved deflection of the nasal septum above the anterior nasal spine, with no overhang, with an actual bend of the spine itself to the narrowed side of the nose. The operation is described as follows: The instruments required are few and simple. A small, sharp-pointed bistoury to divide the frænum of the upper lip. A small strongly made chisel, one-fourth to three-eighths inch broad at its cutting edge, is then passed through this wound and carefully pushed upward in the median line until the maxillary crest is reached. Its shank is then raised so that the cutting surface points directly against this crest, facing inward and very slightly downward or upward, according to the height of the vestibular floor in relation to the floor of the nose. A few light blows of a hammer drives the chisel through the anterior nasal spine as far as the naso-palatine foramen. If the operator has been careful to direct the chisel so as to completely divide the maxillary crest, a finger introduced into the occluded nostril will at once force the septum over as far as it is desired to carry it. A rubber tube splint is now placed in what has been the occluded nostril, and is to be continued in use about as long as required for an Asche operation. A strip of gauze constantly wet with clear cold water is laid over the patient's upper lip, and a second strip across the bridge of the nose. This cold water dressing is continued for one or two days. The patient remains in bed during this length of time, having one of the many alkaline or antiseptic sprays used every two hours through the open nostril, about the entrance of the rubber tube, and about the upper teeth and gums. The operation is done under light anæsthesia. Hæmorrhage is very slight, and provided the cold water dressing has been used there is seldom very marked swelling of the upper lip. Any ridges that exist along the line of attachment of the vomer and triangular cartilage can be removed at the time of the septal replacement, or later, under cocain.

HENRY L. WAGNER, of San Francisco, reported a case of epipharyngeal lympho-sarcoma in a young man of seventeen. The patient was anæmic, a stutterer, a mouth breather, and some-

what deaf, with signs of rickets. The nose was normal, with pale mucous membrane, high palatal arch, and in the epipharynx a growth as large from one side to the other as a hen's egg, and obstructing the posterior portion of the nose. The growth was neither lobulated nor soft to the touch of the probe, as sarcomata are said to be in this region, but its surface was perfectly round and smooth, and its texture very dense. The growth was removed, with some alleviation of symptoms. Soon after there was paralysis and ptosis of the left eye, showing that the morbid process had invaded the brain. An otitis media purulenta afterwards set in, and the patient died about four months after being first seen.

JOHN EDWIN RHODES of Chicago read a paper on "Chancre of the Tonsil," in which he expressed the opinion that many of these cases are acquired innocently. He is also of the opinion that there are many such cases that are not properly diagnosed, being taken for a recurrent tonsillitis. He arrives at the following conclusions: 1. Chancre of the tonsil is often unrecognized because hypertrophy and inflammation are so frequent, and are so closely simulated in the earlier symptoms, which often differ little from an ordinary sore throat. 2. An enlarged and indurated tonsil, with a superficial ulcer accompanied by enlargement and induration of the contiguous submaxillary gland, and which is unchanged by a long course of treatment, renders a diagnosis of chancre probable. 3. The character of the chancre depends upon the original condition of the tonsil as to size, density, and the amount of follicular inflammation, and the coincidence of mixed infection. 4. A certain diagnosis cannot usually be made until the general eruption of the disease appears. 5. The explosion of the disease is no more severe than in chancre elsewhere. 6. The disease is contracted by direct contact or by various media carrying the virus. 7. When we consider the frightful contagiousness of syphilis, and the frequency with which it is conveyed to innocent persons, the most careful use of throat, nose, dental, and other surgical instruments, clinical thermometers, etc., is necessary. 8. Separate instruments should be used for examination and treatment of known syphilitics, but the possibility of contamination before the existence of the lues has been recognized make it imperative that every operator should employ a rapid and efficient disinfect-

tion or sterilization of instruments after the examination or treatment of every patient. 9. Most careful instructions should be given patients as to the necessity of sufficient isolation, the methods of infection, and the period of danger, and the use of individual household and other utensils should be enjoined.

EMIL MAYER of New York read a paper on "Abscess of the Frontal, Ethmoidal, and Sphenoidal Sinuses Complicated by Adenoma of the Posterior Ethmoidal and Sphenoid Regions." Not more than a dozen cases are to be found in literature, and the writer presented a case of his own which occurred in a child aged $2\frac{1}{2}$ years, in whom the general symptoms noted were eversion of the right lower lid, fistulous opening in the cheek on the right side, from which pus exuded, and a most penetrating odor from the same side of the nose. The child had been well until six weeks before, having been seen when an attack of scarlet fever and pneumonia occurred; two weeks later a very severe nasal diphtheria was present. Subsequently an abscess formed on the cheek, which was incised, and a fistulous opening remained. At the time of the examination a small probe entered the fistulous opening and revealed the presence of a large cavity in a downward direction, and had the feel of necrotic bone; examination of the pus showed streptococci and staphylococci in abundance; no Klebs-Loeffler or tubercle bacilli were found. The diagnosis of an abscess of the antrum of Highmore with diphtheritic infection was made. The child was operated upon, and recovered.

The interesting question has been raised regarding these cases as to whether they are simply carious conditions, that is tubercular, or an osteomyelitis.

The writer concludes that it is established beyond doubt that empyema of the antrum of Highmore in young children is not merely caries, or tuberculosis, or an osteomyelitis, but is as distinct an affection as in later life. That so few cases are noted in the living is in all probability due to the fact that the mortality is greatest when this complication occurs, and also that in the very young the presence of localized pain is so difficult to establish, as the little sufferer cannot indicate it.

In all the reported cases the symptoms were the same, namely, fistula under the eye, usually discharging pus, ectropion, one-sided purulent discharge from the nose, with foul odor, and eroded bone.

Careful observation, especially in nasal diphtheria when bacilli are present, may enable us to discover these cases, and by prompt attention recovery results.

Regarding treatment : incision, curettement, and thorough drainage will be followed by complete cure in the vast majority of cases.

J. H. BRYAN of Washington, D. C., reported a very interesting case of "Abscess of the Frontal, Ethmoidal, and Sphenoidal Sinuses," which had been under his care for the last two years. He has operated a number of times, and he gave a history of the various steps that he had pursued in his efforts to relieve and cure this condition, but he has been forced to come to the conclusion that there is but one outcome to the situation, and that is pain, suffering, and finally death coming to the relief, where medical and surgical measures have failed.

CARL SEILER of Scranton presented a paper on the "Effects of Cinchonism upon Vocalization and Articulation." He found in the first place that the ordinary tinnitus aurium due to middle ear disease never transgressed the limits of pitch from D₁ (297 vibrations) as the lowest point to the F₂ (704 vibrations) as the highest, as near as it was possible for him to determine, and that these subjective noises, although variable in quality or timbre, had no appreciable effect upon vocalization or articulation, but that they would invariably and very materially affect the perception of sounds which had the same or nearly the same number of vibrations per second as the subjective noises of the patient. The subjective noises due to quinine, salicylate of soda, alcohol, ether, and many others drugs were invariably of a very high pitch, varying from as low as the G₃ (1584 vibrations) to as high as 3960 vibrations, and often even higher. He also observed that any composite noises of high pitch not only interfered with the pronunciation of those consonants which, according to the investigations of Helmholtz and others, have for their characteristic sounds combination of high-pitched sounds such as "th," "s," "sh," "z," and the like consonant sounds of articulate speech, but also caused them to be easily obliterated, and consequently most difficult to be appreciated and recognized by the ear.

WYATT WINGRAVE, of London, Eng., sent a report of twenty-six

cases of *tonsillotomy-rash*. This is somewhat similar to the surgical rash that follows operations in some cases. The eruption generally appears on the second or third day, and is either papular, roseolar, or erythematous in type. It most frequently attacks the neck, chest, and abdomen, sometimes extending to the face and extremities. The earliest appearance noted was the day following the operation, and the latest the sixth day. Its duration is generally two or three days, but it may extend to five days. After reaching its maximum intensity, it rapidly disappears without desquamation, but is sometimes associated with intense itching. It may occur at any age, the youngest of his cases being fourteen months, and the oldest twenty-three years.

FRANCKE H. BOSWORTH of New York presented a paper on "The Tonsils from a Purely Clinical Point of View." He takes the ground that the only healthy tonsil is one in which there is no hypertrophy. In other words, the tonsil that is manifest on inspection is not a normal one. He advises the removal of this tumor, as he would the tumor of any other kind that might present, whether benign, malignant, or otherwise. He refers to the lacunæ in the tonsils that lead to the crypts in the body as veritable centers of infection, or, better, of incubation. He describes his method of operating, in which he advocates the use of an anæsthetic in all cases of children, preferring chloroform. He has the little patient held in the lap and arms of an assistant, and just enough of the chloroform administered to cause primary anæsthesia, when he removes the first tonsil, then turns the patient face downward until the hæmorrhage has ceased, when a little more of the anæsthetic is given and the other tonsil is removed. If there be adenoids present, these are also removed at the same sitting. In the way of operating instruments, he has discarded all tonsillitomes, and uses the cold wire snare. With this the hæmorrhage is reduced to a minimum, and the wire loop fits about the tonsil perfectly.

C. H. KNIGHT of New York read a paper on "Vocal Nodules." In this paper the writer takes the ground that the majority of these nodules of the vocal cords are due to some abnormal condition in the upper air tract, rather than to any abnormality either in the vocal cords themselves or in the larynx. The nodule is a secondary condition. He also thinks that the condition is more or less permanent, in spite of the fact

that some authors incline to the belief that they are transitory from over-use.

"A Study of the Proper Application of Intubation in Chronic Stenosis of the Larynx" was the subject of a very able paper by W. K. SIMPSON of New York. The writer divides these cases into three classes: first, those of gradual stenosis, of longer or shorter standing, in which immediate intubation is not necessary; second, those cases in which an acute exacerbation renders immediate intubation necessary in order to save life; and, third, those cases where it is desired to avoid wearing a tracheal canula.

In the first two classes, unless a clear view of the larynx can be had and a positive knowledge of the immediate cause of the stenosis obtained, intubation is not to be thought of, but tracheotomy done instead. In doing a tracheotomy, it is well to do it as high as can be done with safety, and then after the immediate symptoms are relieved it is well to intubate. An intubation tube may be worn for months without changing. The difficulty in retaining an intubation tube has been overcome by Dr. John Rogers, who has added to the original O'Dwyer tube a tube at right angles, which is allowed to protrude from the tracheal opening. This secondary tube is added at the time of intubation, after the tube has been placed in position, and marked through the tracheal opening. As the tubes are made of hard rubber, it is a matter of only a short time to adjust the secondary tube in its proper position, and insert the double tube in the larynx.

J. W. FARLOW of Boston read a paper on "Some Cases of Paralysis of the Right Vocal Cord," in which he said that there were very many of these cases that are hard to diagnose. In a general way it may be stated that bilateral and symmetrical paralysis of the adductors points to functional, hysterical, or nervous origin; while unilateral paralysis of the adductors is significant of some central or peripheral affection of the inferior laryngeal nerve. He then gave the history of four cases which he thinks are undoubtedly exceptions to the above rule.

C. C. RICH of New York read a very interesting paper on "Local Treatment of the Nasal Mucous Membrane in Hay Fever." After a very thorough and exhaustive review of the theories of the ætiology of this troublesome disorder, he explained his new method of treatment. It is well known that

there are sensitive areas in the nose, and that these are the primary causes of hay fever is the belief of the writer. He takes the ground that if these sensitive areas are rendered less sensitive, that a long step has been taken in the direction of the prevention of a recurrence of the fever. He was led to this line of reasoning by the using a swab to smooth off some of the granulations in atrophic rhinitis. The method of treatment is to rub or scrub the mucous membrane of the nostrils all over with some solution, or even with simple cotton, and establish a tolerancy of the nasal mucous membrane to the presence of the irritant. In all, or nearly all, of the cases that he has treated by this method he had to accustom the membrane to the touch of the probe. The first applications were apt to cause more or less violent attacks of sneezing or coughing. After a few applications this intolerance passed away, and he was able to obliterate the sensibility very markedly. The applications were made every other day for the first month, and then twice a month after that, beginning four months before the time of the expected attack. The treatment was carried out until the time of attack had passed.

G. HUDSON MAKUEN of Philadelphia read a paper on "Cleft Palate, and Its Relation to Speech," in which he said that the palate is necessary for the pronunciation of consonants, with the exception of "m" and "n." Vowels may be pronounced without a whole palate. The absence of a part of the palate affects the voice according to the position of the perforation, whether in the anterior, middle, or posterior stop positions. This very able paper is one of those that cannot be abstracted, or even described adequately.

A. W. DEROLDES of New Orleans presented a paper "On the Use of the Electro-magnet for the Extraction of Foreign Bodies from the Air Passages," and presented some instruments that he had had constructed for such use. In one case of foreign body in the trachea, after having started to perform a tracheotomy the point of a large Haab magnet was brought near the wound, and the metallic object was immediately drawn out from its place of lodgment. The doctor had conducted a series of experiments on the cadaver, and tabulated their results that they might in a way be a guide in the future application of this method. This is the first time that the magnet has been brought to the notice of the profession for such cases.

F. C. COBB of Boston read a paper on a case of "Pedunculated Fibroma of the Œsophagus Obstructing the Larynx." A woman, fifty-four years old, attributed her condition to the fact that a number of years previously she had swallowed a peach stone. At first on examination no tumor could be seen, but during the examination, which was necessarily somewhat prolonged, gagging occurred, and the tumor was thrown over into larynx. The tumor was removed with the snare, and was regarded as a polyp.

On Monday afternoon the members of the association were invited over to the Psychological Laboratory, where Professor Scripture gave a short lecture on the sound curves. Professor Scripture is engaged in studying the curves of the voice, and he has a large number of records of the voices of many prominent men. He takes the ground that the voice is not the result of vertical vibrations of the vocal chords, but that it is formed by what might be called an explosion, that forces the vocal chords apart horizontally; that a series of puffs are responsible for speech, and not a continuous steady current of air.

The following doctors were chosen officers of the Association for 1901-1902: President, J. W. Farlow, Boston; first vice president, J. W. Gleitsmann, New York City; second vice president, D. B. Kyle, Philadelphia; secretary and treasurer, James E. Newcomb, 118 W. 69th Street, New York; librarian, Joseph H. Bryan, Washington, D. C.; council, Thomas R. French, Brooklyn; William E. Casselberry, Chicago; Samuel Johnson, Baltimore; Henry L. Swain, New Haven.

The next meeting will be held in Boston, in May, 1902.

J. W. JEWETT.

ILLINOIS HOMŒOPATHIC MEDICAL ASSOCIATION—FORTY-SIXTH ANNUAL MEETING. SECTION IN OPHTHALMOLOGY, OTOTOLOGY, RHINOLOGY, AND LARYNGOLOGY. CHICAGO, MAY 9, 1901.

An Unusual Case of Mastoid Abscess, by C. J. Swan, Chicago.*

The author noted first the marked change in the attitude of the profession toward these cases since the days of his early practice, when patients frequently died from unrecognized or unoperated mastoid abscess. At present such operations are the

* Published in extenso in the *Medical Era*.

common experience of almost every aurist, and many lives are without doubt saved thereby.

Not all cases call for operation, and it is often a difficult matter to decide in any given case. Operations made early enough and by skilled surgeons are almost never fatal. The case reported was one in which many of the classic symptoms, such as acute pain, redness, tenderness, and profuse discharge, were lacking. After failure of remedies and local measures, operation was advised because of chronic pain, impaired hearing, and increased temperature. Very little pus was found, but structures were soft and spongy. Curetting was followed by free irrigation. The wound was kept open for about three weeks, after which it was allowed to heal, and the patient went home in perfect health with hearing as good as before the attack.

A Case of Diphtheritic Conjunctivitis, by Edgar J. George, Chicago.

Published in our September issue.

Some Cases Belonging to the General Practitioner Rather than to the Specialist, by C. Gurnee Fellows, Chicago.

Occasional cases come to the oculist for the common symptoms of eye-strain when the trouble is not a local one at all, but depends upon some impaired condition of the general health or some special organs. In such cases the oculist's examination is of service in ruling out eye-strain as a possible cause of the trouble, but after such examination is made they should be referred to the general practitioner or to the appropriate specialist for other diseases. Three cases were reported in which this procedure had resulted most satisfactorily, the patients being entirely relieved by appropriate general treatment.

"The wise physician does not prescribe on separated or individual symptoms, but endeavors to get a picture of his case by any or all of the special physical examinations."

The Oculist in Business, by E. T. Allen, Chicago.

This paper was a discussion of the various ethical questions involved in the oculist dealing with his patients and with his brother practitioner. Several well-recognized principles were emphasized, and some illustrations cited from the writer's experience in practice.

How Shall We Treat Our Laryngeal Cases? by W. M. Stearns, Chicago.

The author laid stress upon the fact that the inflammatory diseases of the larynx are more often than otherwise expressions of a trouble beginning elsewhere, and said that with increasing experience he was coming to depend less and less upon treatment directed to the larynx itself.

The intimate nervous connection between the larynx and other parts of the respiratory tract was noted and its significance pointed out. A case was reported in which a chronic laryngeal cough was found to be due to follicular inflammation in the naso-pharynx, and in which applications in this locality alone were sufficient to effect a complete and permanent cure. The effects of adenoid growths, both immediate and remote, were mentioned in relation to the larynx as well as those of anterior nasal obstructions. Primary catarrhal conditions of the larynx may occur, but are infrequent, although a vocal roughness from improper or excessive use of the voice is not uncommon. For this latter, of course, the only treatment is rest or proper instruction as to the use of the voice in singing and speaking. Homœopathic remedies are always valuable, and should be prescribed according to their ordinary indications. Conservatism as to the use of local applications should always be manifested, as the larynx reacts more violently to such measures than does the nose or pharynx.

— Burton Haseltine.

MASSACHUSETTS HOMŒOPATHIC MEDICAL SOCIETY, SIXTY-FIRST
ANNUAL MEETING.

W. C. GOODNO of Philadelphia read a paper on "Antitoxin in Diphtheria." He gave his experience in the treatment of some two hundred cases of diphtheria with antitoxin, and expressed his belief that if the serum were used properly, and in the early stages of the disease, the mortality need not exceed four per cent. He did not think other treatment, local or remedial, was necessary unless one had to deal with the toxic influence of streptococci, as well as Klebs-Löffler bacilli in a marked degree, then other treatment might be indicated. It was the belief of the writer that in no existing disease had a specific been so certainly demonstrated as in the action of antitoxin in true diphtheria.

The discussion of this logical and convincing paper was opened by G. B. Rice, of Boston,* who heartily endorsed the views of Dr. Goodno. He thought that the homœopathic profession was in duty bound to use this treatment until it could be proved by tests made along scientific lines in a large number of cases that the homœopathic remedy could produce results equally [!] as good. It seemed to him that the issue could not be evaded, and must be met squarely.

The discussion was continued by other members of the society. The majority of those who spoke were favorably inclined toward anti-diphtheritic serum, and used it in practice in connection with other remedies.

G. B. Rice.

WILLS' HOSPITAL OPHTHALMIC SOCIETY, PHILADELPHIA,
APRIL 8, 1901.

Rubelliform Eruption in Interstitial Keratitis, with Acute Articular Rheumatism.

McCLUNEY RADCLIFFE exhibited a child eleven years of age suffering from interstitial keratitis, associated with acute articular rheumatism, upon whom a typical form of rubelliform eruption suddenly appeared during the night of the nineteenth day in the hospital. Temperature, 101° , later arose to 104° ; on the fifth day it fell to normal, and the skin became clean without any desquamation. An atropin solution of four grains strength had been used in each eye twice daily for the nineteen days, and mercurial inunctions in association with the internal administration of salicylate of sodium were also employed.

Drs. Radcliffe and William H. L. Hale thought the case one of anomalous measles, while Prest. Conrad Berens tended to the opinion that the condition was dependent upon gastro-intestinal toxæmia, which was possibly due to a drug, quoting the late Alfred Stillé concerning rubella sine catarrha which had no connection with measles. From a review of the literature of the subject, Clarence Van Epps believed that, of the three drugs given in the case, mercury would be the one that was the most probable causative factor in the production of the rash, but stated that rubella could not be excluded.

Traumatic Diplopia.

DR. ZENTMAYER referred to a case which had occurred in

* Will be published in full in the *Hahnemannian Monthly*.

William F. Norris' clinic, in which the pulley of the superior oblique muscle had been torn loose, but in which the diplopia had been relieved by a tenotomy of the inferior rectus muscle of the fellow eye.

Postneuritic Optic Atrophy from Probable Cerebellar Growth.

SAMUEL D. RISLEY showed a case of postneuritic optic atrophy occurring in a white man aged forty-one. Six days previous to admission vision suddenly failed, followed by a complete permanent blindness in three hours' time. When first seen the pupils were widely dilated and the irides were inactive, the optic nerve heads were swollen to over four diopters, and there was complete absence of other abnormal subjective or objective signs. Twelve days later marked atrophy of the nerve heads appeared. The patient remained under observation for a period of five months without the development of anything.

Owing to the absence of other symptoms than the ocular ones, and as the result of a careful exclusion of all toxic and constitutional causes, Dr. Risley believed that a positive diagnosis of the cause was impossible, though he leaned towards the probability of cerebellar tumor.

William Thomson thought that meningitis should be considered as the most probable cause. Dr. Van Epps spoke of the so-called "silent areas" of the brains (the frontal and the temporo-sphenoidal lobes and the cerebellum), and considered cerebellar growth as the most likely diagnosis.

Sarcoma of the Orbit.

C. A. OLIVER reported a case of orbital sarcoma, with lymphoid extravasations into the surrounding sinuses, thus producing shadows by electric transillumination, which at times might give rise to a faulty diagnosis. The interesting point of the case was the extent to which caries of the orbital walls, with involvement of the surrounding sinuses, had progressed without producing much ocular disturbance; the patient, at the time of operation for evisceration of the orbit, possessing a vision of one-eighth of normal with an eye that was proptosed down and out.

Buphthalmos and Myopia.

DR. GEORGE C. HARLAN showed a buphthalmic eye removed, on account of pain, from a nine-year-old child, the condition having been the result of a purulent conjunctivitis. The globe

measured 41 mm. in its antero-posterior diameter and 33 mm. vertically. The corneal diameter was 27 mm., the weight of the eyeball 120 grains. Dr. Oliver showed two microscopic sections of a myopic eyeball with antero-posterior diameter $43\frac{1}{2}$ mm., the other diameters being less than those in Dr. Harlan's case. The point of interest in Dr. Oliver's case consisted in the intimate adhesion of the iris at its root to the periphery of the cornea, which most probably was the main indirect cause of the hyperdistention of the eyeball from long continued low grade inflammatory hypersecretion.

Evisceration of the Orbit for Carcinoma.

DR. THOMSON reported a case of evisceration of the orbit for a residual papillary carcinoma in a white man, aged seventy-nine, the primary growths of the outer canthus and the globe having been removed two years previously. The second operation was performed to relieve the intense pain produced by the pressure of the imprisoned tumor. The patient was much bettered and out of bed the third day after the operation.

Mules' Operation.

DR. OLIVER showed a practically healed case of Mules' operation done five days previously, and stated that in his experience the average time in the hospital for such cases was about seven days. He again took occasion to emphasize the importance of the value of firm compress bandages during convalescence.

ABSTRACTS FROM CURRENT LITERATURE.

Neuritis Recurring after Atrophy of both Optic Nerves in a Case of Brain Tumor.—Edward R. Williams.—*Boston Med. and Surg. Journ.*, May 16, 1901.

A woman, twenty-two years old, began to have headaches and vomiting in 1897; sight failed, and staggering vertigo with numbness of the right side appeared in 1898, when the ophthalmoscope showed double optic neuritis with the typical macular changes of albuminuric retinitis, but her urine had been pronounced healthy. Memory failed somewhat.

November 6. No perception of light; optic disks greenish-

white, arteries and veins threadlike lines. November 21, semi-comatose; double optic neuritis, < in left eye. The veins were large and tortuous, and the swollen disks gave a typical picture of neuritis. Coma increased, and she died two days later.

Primary Chancre of the Septum Nasi, in a physician, caused by picking the nose after examining a woman who proved to be syphilitic, is reported by W. Freudenthal in the *N. Y. Med. Jour.* of May 16.—*Am. Med.*, May 25.

Atresia Auris Congenita.—Hunter Tod.—*Jour. Lar. Rhin. and Otol.*, March, 1901.

Author's conclusions: 1. The deformity is not hereditary, and the cause is not known. 2. It occurs rather more often in females, and is more often unilateral than bilateral. 3. One may get accompanying deformities, chiefly due to mal-development of the parts in connection with the first and second brachial arches. 4. The labyrinth is rarely affected. Hearing tests give practically the same results as those in an uncomplicated middle ear affection, but more marked. 5. Embryological, pathological, and clinical observations prove operation to be useless. 6. Something more, perhaps, can be done by careful non-operative treatment and by early and assiduous instruction in speaking and lip-reading. A table of fifty-seven reported cases is appended.

A. W. P.

On the Healing of Cerebral Abscesses.—Professor Passow of Heidelberg. Transl. by R. Jordan from vol. xxxvii of Germ. edition *Archives of Otology*, February, 1901.

Autopsy on a man who had committed suicide seventy days after the professor had operated for cerebral abscess showed that cicatrization had taken place. Mastoid operation April 15, 1899. In scraping granulations from the bare dura pus oozed through it, and the probe entered a cerebral abscess about three cm. deep, which was opened by a crosscut, drained and loosely packed with xeroform gauze, with which the mastoid cavity and external canal were packed. Next day a little pus escaped from the cerebral abscess; tamponing was omitted, and as that secretion ceased on the following days the incision in the dura was allowed to close. Temperature at first to 100.4° F. fell soon to

normal; intermittence of pulse gradually disappeared; discharge from the tympanum ceased April 22; perforation of the drum closed; hearing improved rapidly to nearly normal; and May 15 he was discharged from hospital for outdoor treatment. While in hospital he was exceedingly anxious and worrying. June 10 caught cold, otitis recurred for a little while, he became depressed, hypochondriacal. Probing revealed a small piece of bare bone in the mastoid wound. He promised to come into the hospital for a few days, but instead cut his throat and died of hæmorrhage from lateral incision of the right superior thyroid artery.

At the autopsy, on lifting the brain a piece the size of a large pea remained attached to the tegmen tympani. This left a defect in the brain from which a barely visible cicatrix 1.5 cm. long, without pigment, softening, or fibrous tissue, could be traced into the brain substance. On detaching the dura from the tegmen the opening made by the operation was recognized and found filled with loose cicatricial tissue, some of which, under the microscope, was degenerated brain substance. The gauze in mastoid wound was impregnated with serous, not with purulent, secretion. Careful examination of the mastoid nowhere revealed diseased bone; the wound had closed considerably. The middle ear was normal. The tegmen on the healthy side was very thin and cribriform. A small lenticular osteoma with sharp, notched edges was found in the falx cerebri.

As, unfortunately, frequently occurs, the symptoms were comparatively insignificant. Even the extensive destruction in the mastoid process could not be diagnosed with certainty before the operation. Only the irregularity of the pulse, which was neither slowed nor accelerated, but was somewhat irregular at times, intermittent after the fourth or eighth beat, aroused suspicion of cerebral complication. Several microscopic cotton fibres from the dressing were healed in the brain substance. Hegener found similar fibres in the cicatrices following "radical operations" (*Zeitschr. f. Ohrhk.*, Bd. xxxvii. s. 117). There was, under the microscope, no sharp boundary line between the abnormal and its surrounding normal tissue. The condition of the dural cicatrix was found to be similar to that described by Macewen, except that the dura was not adherent to the connective tissue which filled the gap in the tegmen tympani—possibly

because seventy days had elapsed, instead of forty-seven, as in the child operated on by Macewen. Röpke (*Z. f. O.*, xxxiv., s. 119) found only six reports of autopsies in which the healing process in evacuated brain abscesses was mentioned. Careful microscopical examinations have not been reported, to Professor Passow's knowledge. There was no history of mental disease in the patient's family. He had always been in good health; was not a drinking man; his financial and family affairs gave him no cause for anxiety. It was not likely that in "our" case, as in Pluder's (*Arch. f. Ohr.*, Bd. xlv. s. 101), the mastoid operation had caused the psychical disturbance; "we" would rather attribute it to the patient's dread of a prolonged illness and a second operation. The cicatrix in the cerebrum was too insignificant to have caused the mental disturbance. J. L. M.

Economy in Employment of Cocain.—Wyatt Wingrave.—*Jour. Lar., Rhin., and Otol.*, December, 1900.

A two per cent. solution in equal parts of almond and petroleum oil is efficient in removal of foreign bodies from nose, etc. This takes longer to commence action, but also continues longer than aqueous solution. Cocain, five per cent., and sodium sulphate, two per cent., aqueous solution equals in effectiveness the strongest used solutions; furthermore the action is much quicker.

For submucous injection eucain hydrochlorate, five per cent. combined with sodium sulphate, two per cent. is most advantageous. A. W. P.

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BOOK REVIEWS.

SAUNDERS' MEDICAL HAND-ATLASES—ATLAS AND EPITOME OF OPHTHALMOSCOPY AND OPHTHALMOSCOPIC DIAGNOSIS. By Professor DR. O. HAAB, Director of the Eye Clinic in Zurich. From the Third Revised and German Edition. Edited by GEO. E. DE SCHWEINITZ, Professor of Ophthalmology, Jefferson Medical College, Philadelphia. With 152 colored lithographic illustrations and 85 pages of text. Philadelphia and London: W. B. Saunders & Co., 1901. Price \$3.00 net.

An excellent work, that should be in every oculist's hands. Compared with Clarke's translation of the first edition, published in this country in 1895, we find 80 instead of 63 plates, and 80 instead of 54 pages of Introduction and Ophthalmoscopic Diagnosis. A good index still further increases the value of this last edition. Colored illustrations (good ones) are necessary, if we would profit by the experience of others. Oculists, but especially students, should form the habit of drawing what they see. This sharpens the observation and fixes the picture in the memory. These plates are meant to be viewed by daylight; their coloring then appears like the fundus when examined with a yellow artificial light.

J. L. M.

SAUNDERS' QUESTION COMPENDS—ESSENTIALS OF REFRACTION AND OF DISEASES OF THE EYE. By EDWARD JACKSON, A. M., M. D., Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic. Third Edition, Revised and Enlarged. 12mo, 261 pages, 82 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$1.00 net.

In this edition the work has been carefully revised and very much enlarged, the contents being more complete and more symmetrical than was possible in the earlier editions. The injuries of the eye by traumatism, and the ocular symptoms and lesions of general diseases, have now been given a consideration proportioned to the great importance they assume in the work of the general practitioner. There has been added also an account of the application of the tests of vision required in the army, navy, and railway service.

If we were hypercritical we would suggest that c., as well as cy. or cyl. indicates that a lens is cylindrical, and would again take Dr. Jackson to task for ignoring the proper terms, *astigmia* and *astigmatic*, instead of astigmatism and astigmatic. J. L. M.

ON RESPIRATION IN SINGING. By DR. JOAL (of Mont Doré). Translated and Edited by N. NORRIS WOLFENDEN, M. D. Cantab., Founder (with Morell MacKenzie) and Editor of "The Journal of Laryngology, Rhinology, and Otology"; Late Senior Physician to the Hospital for Diseases of the Throat, Golden Square; Vice President of the British Laryngological Association; Fellow of the American Laryngological Association, and of the French Society of Laryngology; Consulting Physician to The Pearl Life Assurance Company, etc. Illustrated with Colored Frontispiece and a Number of Diagrams in the Text. London: F. J. Rebman, 11 Adam Street, Strand, 1895.

At first thought a review of this work written for musicians would seem out of place in a strictly medical periodical; but the laryngologist who so frequently is consulted by the broken-down singer, after carefully studying and assimilating this book and that of Dr. Curtis, can often more practically benefit his patient by diagnosing the improper manner in which he or she is breathing, and advising a teacher of correct principles, than by any medicinal or hygienic treatment he can administer himself. At least, after the acute pathological condition is relieved, this is the only way in which to prevent subsequent attacks of similar character. The book gives a thorough history and explanation of all the methods of artistic respiration, the points in their favor and

against them, and finishes with the effect of sundry conditions upon the voice; *e.g.*, nasal affections, hypertrophy of the adenoid tissues, dyspepsias, odors and perfumes, etc., etc. A. W. P.

REGIONAL LEADERS. By E. B. NASH, M. D., author of "Leaders in Homœopathic Therapeutics," "Leaders in Typhoid." Boericke & Tafel, Philadelphia, Pa., 1901. Pp. 282. Price, half morocco, \$1.50 net; by mail, \$1.57.

Like all of his writing, this is suggestive, helpful, practical. More directly than his other books does this make for homœopathy, as distinguished from empiricism. While open to the objection that it favors symptom-hunting and prescribing upon keynotes, such is mere caviling; everyone who reads Nash properly will become a more skillful and more faithful homœopath. This little volume, handy to the hand and for the pocket, is designed to refresh the memory. Like all repertories it is but suggestive of the remedies to be studied for the case. Sight and eyes take 15 pages, hearing and ears 5, nose 6, mouth and throat 16, respiratory organs 18. The typography, paper, and binding are excellent. J. L. M.

SELF-EXAMINATIONS FOR MEDICAL STUDENTS. 3500 Questions, with the Proper References to Standard Works in which the Correct Replies will be Found. Third Edition, Enlarged. With Questions of the State Examining Boards of New York, Pennsylvania, and Illinois. Philadelphia: Copyright 1901, P. Blakiston's Son & Co., 1012 Walnut Street. Pp. 229. Price 10 cents.

A handy little book, $\frac{5}{8} \times 4\frac{1}{2} \times 3$ inches, interleaved. About 266 practical questions—14 pages—cover pretty well the anatomy and physiology of the eye, its optics and refraction, examination, diseases, treatment, and operations. No attention is paid to the ear, nose, or throat. Although designed for students, the practitioner may use it to test his memory to advantage at odd moments. J. L. M.

NOTICE.

The New York State Homœopathic Medical Society will hold its semi-annual meeting near the Exposition grounds, Buffalo, in the last week of September, holding three morning sessions only, from 9 A. M. to 1 P. M., probably Tuesday, Wednesday, and Thursday. The hotel rates will not exceed \$3.00 per day.

THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

EDITOR,

JOHN L. MOFFAT, M. D.

ASSOCIATE EDITOR,

A. W. PALMER, M. D.

THE APPLICATION OF ELECTRO-STATIC CURRENTS TO NERVOUS AND INFLAMMATORY AFFECTIONS OF THE EYE, EAR, NOSE, AND THROAT.

WILLIAM BENHAM SNOW, M. D.,

Late Instructor in Electro-Therapeutics and Nervous Diseases of
New York Post-Graduate Medical School and Hospital.

THE successful employment of static electricity, in one or another of its forms of application, to a large number of nervous affections of inflammatory and trophic origin, includes in its list many affections of the organs of special sense and of the vocal and respiratory organs. The class of affections due to impaired nutrition, and functional in character, shows both local and constitutional improvement from the proper administration of such currents.

Considerable experience has convinced the writer that adynamic conditions invariably have changed for the better, or entirely disappeared, during a course of local treatment; especially is this so when the case has called for prolonged treatment with the wave current. The reason for such results is apparent when it is understood that with every local application of the wave current, spark, breeze, or spray, the effect is to increase in varying degrees all functional activities. The currents traverse from the points of

inception to the surface of the body, invading all structures and promoting general cell activity. Such effects are not derived from currents employing two electrodes, because the passage of such currents are in the main by shortest routes and best conductors between the surfaces of contact. The nutritional effects of static administration have been clinically demonstrated in hundreds of cases by careful observers, and are worthy of earnest consideration from physicians in every special department of the profession. The local effects, however, appeal more directly to the observer, and are usually apparent from the first administrations.

The galvanic, faradic, and possibly the sinusoidal currents have in the past been indicated whenever the employment of electricity has been considered in the treatment of affections of the eye, ear, nose, and throat. The constant (galvanic) current is valuable when the removal of ulcers, growths, hypertrophic conditions, or organic strictures of the mucous membranes are indicated. Electrolysis and metallic electrolysis are successful and effective measures in the hands of experts.

If, however, we have to contend with paralyses, impaired functions, or acute conditions accompanied by hyperæmia and congestion, and not due to a specific poison, we have in the wave current a painless, safe, and effective means of electrical administration which deserves a larger measure of professional attention. It may be applied over the most sensitive membrane without discomfort, and a voltage employed fully one thousand times greater than when using the faradic current, which is always painful. All peripheral paralyses are promptly relieved if the case is recent; and long-standing ones have a greater chance of improvement than from any other plan of treatment. There is no agent which offers so great prospects of success in the treatment of optic neuritis. When there is disturbed secretion of the lachrymal glands, such as often accompanies paralysis of the facial nerve, the application of the wave current affords prompt relief. The following case will illustrate :

Mrs. M. came to my clinic suffering from Bell's palsy of two weeks' standing. The involved area included the right side of the face to the median line of the chin and forehead. The secretion of the lachrymal gland had been absent since the attack. The surface of the conjunctiva was dry, and the eyeball painful, and the lids were in the characteristic condition.

A thin sheet of block tin was fitted to the affected area and secured by a bandage, the closed eye being covered, and the wave current was administered for ten to fifteen minutes daily. The length of the spark-gap was regulated to the toleration of the patient (never to produce discomfort), and did not exceed one-quarter inch. After the second treatment the secretion was considerable, and at the end of one week normal. The progress of improvement was otherwise satisfactory, and at the end of two months the features were normal.

The earlier such cases are treated, other things being equal, the more prompt the recovery. The congestion in peripheral cases, which causes pressure upon the nerve in the bony canal, can be promptly relieved when applied over the site, and cured in a few days when treated early. When the lesion is in the cortex, it is quite a different matter.

The treatment of Graves' disease is another in which marked results are obtained from this method of treatment, as the following case will illustrate:

Miss A., aged twenty-three, came to my clinic with a history dating from two years previous. The goitre, while marked, was not as pronounced as in many cases. The eyes were very prominent, and the pulse 160. The dyspnœa was very marked and anæmia pronounced. As the patient could not receive daily treatment at the clinic, I treated her at my office. Constitutional treatment was given, employing a long spinal electrode for fifteen minutes, and ten minutes' application of an electrode covering the thyroid.

The result was marked from the first. Before the end of the second week the pulse was constantly below ninety, and the dyspnœa had disappeared. Her general health improved, and the enlargement of the thyroid was less marked. At this time we began treating the eyes with the hope of making the deformity less prominent. Metal electrodes were applied over the

closed lids for five minutes daily. The treatment was continued off and on for one year, during which time her general health became normal, the goitre less prominent, the heart complication entirely disappearing, and there was some improvement in the appearance of the eyes. It is now one year since treatment



FIG. 1.—Taken two years before the patient came under observation.

was discontinued; the patient has remained well and grown stout, and there has been no return whatever of the heart complication.

Dr. A. H. Allen, of Gouverneur, N. Y., under date of April 18, 1901, reports the following case:

A lady who had exophthalmic goitre had been told that she had consumption, and had but a short time to live. Patient had a bronchial cough, and was much emaciated, weighing 85 pounds. Treatment was begun in November, 1899, with static electricity. In March, 1900, she returned to her home in Kansas, well, and

weighing 120 pounds. A recent letter reports that she remains well, doing her own housework on a farm.

While such marked effects are not obtained in every case of the disease, most of them do well and are much im-



FIG. 2.—Taken at the institution of treatment.

proved, and if taken early we believe a large proportion will be cured.

During the month of February, 1900, Professor William Oliver Moore, M. D., referred the following case from his clinic in the Post-Graduate Hospital to my department:

Mr. S., aged twenty-seven, paralytic mydriasis. Under treatment in the eye clinic for two weeks. Eserin caused partial contraction of the iris, but produced painful sensations within the eye and pain in the head on the same side. The case had made no improvement during two weeks of treatment. A metal electrode was placed over the closed lid of the affected

eye and held in position by the patient's hand. The grounding chain was removed and the wave current,* thus modified, with a spark-gap regulated to the comfort of the patient, was administered for ten minutes daily. After the first treatment there was marked improvement, and at the end of three weeks the eye, tested in the direct rays of the sun, was normal.

In the above case there was a suspicion of syphilitic origin, and so there is in many other cases of optic paralysis where it is not present and specific treatment utterly fails.

The electro-static treatment of many such cases promises most satisfactory results when the lesion is not of central origin.

Ptosis, convulsive tic, and other affections involving the nervous system, are followed by the best results when treated early. The writer's experience is not large in cases of hyperæsthetic neuroses, but he has marked most gratifying results in the treatment of rose fever, hay fever, and asthma; this warrants a most careful investigation in the future.

The congestive conditions associated with so-called singers' or clergymen's sore throat are greatly relieved and controlled when treated early with the wave current and brush discharge. Cases of tonsilitis, accompanied by fever, marked pain, and swelling have been promptly relieved by the same means.

While comparatively little has been done in the fields of these specialties to date with electro-static applications, we feel justified in making the above reports and suggestions, and have reason to expect good results in many acute and chronic affections, and that the future has much to record from the employment of static electricity in the several specialties.

154 West Thirty-fourth Street.

* For description of the method of operating the wave current see writer's article in the *Jour. of Electro-therapeutics* for June, 1901.

ON THE EXCISION OF THE RETROTARSAL FOLD.*

N. A. KAN.

THE long wrangle concerning the advisability of excision of the retrotarsal fold has brought out diverse opinions, even at the last international Ophthalmic Congress held at Moscow; nevertheless this method is gaining ground little by little.

The government of Prussia is paying strict attention to the spreading and to the treatment of trachoma, and at the suggestion of Professors Kunth, Graefe, and others a statistical list of the best treatments of granular conjunctivitis has been edited.

From this publication it can be seen what splendid results have been accomplished by excision of the retrotarsal fold, and it seems to me everyone will rather agree with the authors who labor in a land prolific with trachoma than with the ophthalmologists who have very few cases of granular conjunctivitis in their clinics.

Being aware of the value of excision of the retrotarsal fold, especially to an oculist laboring in Russia (in the Baltic region, according to the statistics of Professor Kirschberg of Riga, of every hundred cases of eye disease twenty are trachomatous), I began three years ago to apply this method, following strictly the labors of Kunth, "Ueber die Therapie der Conjunctivitis Granulosa," and I think everyone will be able quickly to perform this operation after a little experimenting, using local anæsthesia (one-fourth

*Translated by Dr. H. Zeckhausen, New York, from *Vratch*, No. 12, vol. xxii.

syringe Kravaz of six to ten per cent. cocain under the conjunctiva). I shall take the liberty here to go a little more into details concerning the application of the sutures.

To obtain the best results it is absolutely necessary, after excision, to put in sutures ; but sometimes good results are obtained without doing so.

The avoidance of sutures is resorted to because of the unpleasantness they cause. Kunth writes: "There is much written and discussed whether the threads should be cut longer or shorter, and again whether the middle incision should be united by suture, because at the slightest movement of the eyeball the thread may produce injury to the cornea ; it will happen so if we use hard silk, but since I have come to the conclusion that black eye-silk (*schwarze Augenseide*) is an excellent material for sutures, preserving, even after a long time, a remarkable softness, I always cut the threads at the external canthus.

"As has been proved by a thousand experiments, a long thread does not cause the slightest inconvenience ; still more, it permits an earlier removal of the sutures, because it is not necessary to turn up the eyelid, which in itself (as is known) causes a separation of the edges of the scarcely healed wound."

Personally I have observed the following :

When using catgut and cutting off the threads very short, the patients in the first twenty-four to forty-eight hours complain of unbearable friction in the eye ; indeed, we may thus cause an injury to the cornea, because catgut, even on the fifth day, remains firm.

In using silk, even such a soft one as the black eye-silk, and in cutting the thread on the outside of the eyelids, the patient nevertheless has a sensation as if something lies in the eye ; if, considering all this, until now there has been scarcely noticeable any excoriation of the sclera, then this can be explained only by the stability of the latter. I finally succeeded by the following method in removing this effect: On separating the diseased fold from the well one by an incision from the inner to the exterior canthus, and

tearing it 0.4 to 0.6 cm., I take two silk threads, having on either end a short curved needle, and put one thread between the outer and middle third of the incision, at first only through the conjunctiva from external inside, so that the noose of about 0.3 cm. in width is on the conjunctiva of the eyeball. The same is done with the middle and the internal third of the incision. Then I cut out the diseased fold, and, if necessary, a part of the cartilage, and then only I insert the needles in the corresponding places of the incised cartilage, guiding them perpendicularly through the subcutaneous cellular tissue and the skin of the eyelid, at the same time holding the middle finger of the right hand on the head of the needle so as not to injure the conjunctiva. At last I make a knot on the eyelid itself. Such sutures can be removed at any time and under any circumstances without turning up the eyelid. The danger of injury to the cornea from the noose is insignificant, because the noose is always softer than the knot. And again the suture-knots are not in the middle of the incision, but at the ends.

The threads can also be passed through the conjunctiva so as to have the knot on the scleral conjunctiva, at which state contact with the cornea is practically impossible. No folds will ever be formed at the junction of the incision if we are careful when putting in the sutures.

GOUT AND RHEUMATISM OF THE EAR.

FRANCIS B. KELLOGG, M. D.

Los Angeles, Cal.

IN connection with Dr. Kehr's excellent article upon this subject in the January number of the JOURNAL, I would present a few personal observations. Some time ago the writer saw the following recommendation in an old-school journal: "In tinnitus aurium give from five to ten drops of tr. cimicifuga three times a day." It was given out as a specific. The relation between rheumatic gout and cimicifuga does not need to be pointed out to a homœopath. It is my belief that the cases in which it is found to be effective will, upon examination, prove to have a rheumatic or gouty diathesis as a basis. The fact, therefore, that cimicifuga has been offered as a specific only emphasizes the frequency with which rheumatism and gout are associated with affections of the ear. With this preface I would cite a recent case from practice:

About one year ago Mrs. F. L., the wife of a homœopathic physician, consulted me for pain in her right ear. For three years it had troubled her at times, with increasing frequency. It was described as a dull ache with frequent twinges of pain. The affection was sufficiently pronounced at times to interfere with her sleep at night. There was also some restriction of hearing, some narrowing of the Eustachian tube, with tinnitus. The case seemed so clearly catarrhal in its nature that I treated it with mentho-thymol injections through the catheter, together with various homœopathic remedies internally. The injections gave immediate relief of pain, and sufficient control was estab-

lished so that she would go for some weeks at a time without treatment. But the intervals between attacks gradually lessened, until it became evident that she was gradually getting worse instead of better. At one of her visits she called my attention to the sensitiveness on pressure of the external neck in the region of the right tonsil. The tonsils had never shown any marked involvement beyond a slight congestion, and were not enlarged. The refusal of the condition to yield to catarrhal treatment, together with this discovery of the tonsillar connection, aroused my suspicion of a rheumatic basis. It was still further established by the existence of slight rheumatic pains in the arms and shoulders. I at once put her on five-drop doses of tinct. *cimicifuga* three times a day, and told her to call again in three days. I saw nothing more of her for a week, when she telephoned me that since taking the medicine she had not had a single twinge of pain in the ear. This was some three months ago, and there has been no recurrence. During that time she has visited me once to report progress. I then found that the hearing was decidedly improved, and also that an annoying pruritis of the external canal had disappeared with the earache.

It is a frequent experience that in operating upon the tonsils pain is felt in the ear, being reflected thereto via the glosso-pharyngeal nerve. In cases of non-inflammatory earache, therefore, it is important to remember that the seat of irritation may be in the glandular structures of the throat, in which case it is apt to be rheumatic in character; thus it is necessary in these cases to examine carefully the condition of the tonsils and to regard with suspicion any congestion, especially if associated with enlargement. I believe that this course will clear up a great many otherwise obscure cases, and it should be borne in mind, even where there is no pain in the ear and the symptoms seem exclusively catarrhal.

The presence of rheumatic indications elsewhere would justify applying the test of treatment even in the absence of apparent tonsillar involvement.

Douglas Building.

A CASE OF DIPHTHERITIC CONJUNCTIVITIS.

EDGAR J. GEORGE, M. D.

Chicago, Ill.

MRS. M., aged forty, consulted me December 28, through the advice of her physician, Dr. A. G. Thome. For the past five days she had been suffering from a severe inflammation of the eyes; the pain was of a burning, boring character, with a sensation of intense pressure. She walked the floor day and night, and only received temporary relief from hot applications.

On examination the integument was œdematous, the lids markedly thickened and stiff, and it was with difficulty that the upper lids were everted. The palpebral conjunctiva of the upper and lower lids were completely covered with a thick, grayish, fibrous membrane, which did not intrude upon the ocular portion. The ocular conjunctiva was swollen, but slightly hyperæmic, exhibiting marked infiltration. Photophobia was moderate, the discharge was slight, of a muco-purulent character, and the temperature was 100.6°. A portion of the membrane was readily detached from the left upper lid (leaving a raw, bleeding surface beneath), which presented on inspection a grayish-white, dense, coagulable or fibrous organization of leathery consistency. The mucous membrane of the throat was slightly congested, but normal. But in the nose on the anterior end of the right inferior turbinated body there existed a small patch of membrane.

Five days ago her eyes became sore, and gradually grew worse; she also felt sick and exhausted. It was at this time that her physician was called in.

Nine days before the beginning of her eye trouble she visited a sick woman confined to her bed in a darkened room, suffering

from a severe sore throat and inflammation of the eyes. Owing to the foulness of the air she remained but a few minutes.

The symptoms being so well defined, there seemed to be no question as to the diagnosis. The patient was advised to return home at once, the hot applications were ordered to be continued, and a permanganate solution, gr. 1 to oz., instilled into the eyes every hour.

As the patient resided a considerable distance from my office, it being impossible for me to visit her, she was referred back to Dr. Thome for further treatment, who reported to me daily. Several days afterward the doctor informed me that diphtheria had invaded the throat, and in this form ran its usual course. At the same time her eyes grew gradually better, and she made a slow but complete recovery.

I did not see her again until February 13; it was the first time she had been out of the house since her illness. The eyes were well, the discharge had ceased, but on everting the upper and retracting the lower lids a number of vertical bands of adhesion were to be seen running from the palpebral to the ocular conjunctiva. The lids were also adhered to the ocular conjunctiva and caruncle at their inner angles.

The portion of membrane which had been removed was sent to Dr. E. G. Davis, bacteriologist to the Chicago Homœopathic Medical College, who reported as follows :

“The pathological examination of the conjunctival membrane presents microscopically a thick, tough, leathery pseudo-membrane of grayish-white color. Microscopically, there is seen a fibrinous network enclosing degenerated epithelial cells and infiltrating leucocytes. The bacteriological examination showed the presence of the Klebs-Löffler bacillus in the membrane.

“Remarks : Inflammation with the formation of a pathologically analogous pseudo-membrane may be excited by bacteria other than the diphtheria bacillus, or by the too energetic use of a variety of severe irritants, and is often referred to in an anatomical sense as diphtheritic; but the presence of the diphtheritic bacillus in the membrane proves it to be a true diphtheritic conjunctival membrane.”

Conjunctivitis diphtherica is distinguished by two forms: the superficial, or croupous, and the deep. The croupous

covers the palpebral conjunctiva, and frequently extends to the ocular portion. The membrane gradually disappears in from one to two weeks, leaving an intense catarrh that ceases after a time with very little tissue change. The deeper form is more serious and destructive to vision. The exudate coagulates within the tissues, compresses and strangulates the blood supply, causing necrosis of the cornea, as well as of the palpebral conjunctiva, thereby resulting in cicatricial contraction and distortion of the contour of the lids. The general condition is more profound, the fever is higher, and the patient greatly prostrated. Weakly children seldom survive the severity of the disease. With such a case the prognosis is doubtful both to the eyes and life as well. Although these two forms are markedly different, they are, however, the same disease.

Patients afflicted with diphtheria of the conjunctiva undoubtedly have other diphtheritic affections, either of the mouth, throat, or nose. The involvement of the eyes can be direct, but is generally by extension from the nose through the nasal duct.

Marshall Field Building.

THE TONSILS AS PORTALS OF INFECTION.*

A. W. REDDISH, M. D.

Sidney, Ohio.

THE tonsils present from ten to fifteen puncture-like orifices leading into recesses called crypts. They are compound follicular glands, and are similar to the solitary glands of the intestines. The secretion of the tonsils is derived from the mucous glands in the mucous membrane lining the crypts. Inspissation of the mucus in the crypts of hypertrophied tonsils gives rise to the formation of cheesy plugs, which contain decomposing epithelium, emit a foul odor, and produce a fetid breath.

I cannot find in the "American Text-Book of Physiology" a mention of the tonsils; their existence and function are ignored. The office and duty of the tonsils have long been a matter in dispute among physiologists.

While students may differ as to their functions in health, it is the consensus of mature medical opinion that in disease they are the portals of entrance of various germs. Standing as they do at the gateway to the respiratory and digestive systems, with the food we eat, the water we drink, and the air we breathe passing by them, they are naturally exposed to infection and cold. Consequently they are frequently diseased, and a diseased organ has a feeble resistance and becomes a nidus for germs. Deaver in his "Surgical Anatomy" says:

"It is quite probable that germs in the stagnant secretion in the crypts of the tonsils enter the lymphatic ves-

* Read before the Miami Valley Homœopathic Medical Society.

sels and cause many of the cases of inflammation and tuberculosis of the deep cervical chain of lymphatic glands." Diphtheria and scarlet fever find lodgment upon the tonsils, and from this starting point invade the lymphatics and general system. Rheumatism and the diseases associated with it—endocarditis and chorea—are probably due to germs entering through the tonsils. A recent experience along this line calls it to mind:

Sadie E., a middle-aged lady, came under my care a year ago. She was a catarrhal subject, with the following symptoms: Nasal obstructions due to hypertrophy of the turbinates; chronic follicular inflammation of the tonsils; chronic proctitis, with morning diarrhœa; muscular rheumatism; loss of weight and nervous symptoms. I treated this patient's nose and throat with a compressed air apparatus, and she frequently remarked after treating her tonsils with a solution containing iodine that the rheumatism disappeared for a time, and finally remained away permanently.

A more recent case:

A man with catarrhal deafness also suffered from muscular rheumatism about his arms and shoulders. After treating his throat and nose for a few months, and inflating the middle ear through the Eustachian tube with a medicated nebula, the rheumatism disappeared.

If we believe in the germ origin of disease, and I believe we do, we must also believe in a definite point of infection. This point must be in an exposed position, and if this is also diseased, it is especially vulnerable. Uncooked food, unboiled water, and unstrained air constantly stream past the tonsils, and our only safeguard is in having healthy organs. These organs, whose only duty seems to be that of lubricating the bolus of food and mechanically molding it into shape to be swallowed, must be well kept and healthy.

908 Ohio Avenue.

THE ADVANTAGES OF DIPHTHERIA ANTITOXIN IN THE TREATMENT OF DIPHTHERIA.*

GEO. E. GORHAM, M. D.

Albany, N. Y.

THE advantages of diphtheria antitoxin in the treatment of diphtheria, the title of my short paper, may be mentioned in a few words: when given early enough, and in sufficient dose, it cures diphtheria! When we consider what such a statement means,—that a malignant zymotic disease, for which there was never before known a cure, may be cured in from twenty-four to forty-eight hours,—it would seem we had said enough of its advantages.

Others points may be mentioned, however.

One single dose, administered by the physician himself, often does the entire work. What an advantage this is over sprays and gargles, pills and powders, administered day and night for several days, while intense anxiety on the part of friends and physician, and great suffering on the part of the patient, are the usual accompaniments.

I have stated that no other cure is known for diphtheria. I do not say that other lines of treatment have not been applied and patients recovered; but in all former treatments the disease has run its course, many patients recovering; but this does not prove that the treatment cured. With diphtheria antitoxin the whole process can be arrested, and often within twenty-four hours the patient is

* Read before the Homœopathic Medical Society of the State of New York, Annual Meeting at Albany, February 15, 1901.

thoroughly convalescent. Again, it can be proven that no bad results follow the use of diphtheria antitoxin, when properly administered. A potent and sterile antitoxin, a sterile syringe, and complete aseptic technique are the requirements. Abundant statistics from careful observers may be readily obtained to prove the statements above made, but I deem it wiser and more profitable to give the time which might be taken in presenting them to a free discussion of this subject.

I would mention that in Albany diphtheria antitoxin is generally used, and since its use Dr. Wm. Hailes, who had done nineteen-twentieths of all the intubation for years, tells me that his work has fallen off ninety-five per cent. In the Albany Orphan Asylum during the last year thirty cases of diphtheria occurred and all were treated with antitoxin. All recovered; most of them in from twenty-four to seventy-two hours. St. Margaret's Home and the Child's Hospital have also had as satisfactory results.

Discussion.

WALTER SANDS MILLS : I should like to ask the essayist (1) why, if no method of treatment before used has ever cured diphtheria, the statistics of homœopathy are so much better than those of the old school; (2) why some of the people who have had the most experience with diphtheria antitoxin have declined to use it on their own person when taken sick.

There is no question about the fact that there has been a vast improvement in the results of treatment of diphtheria at large, but the query is : Is not homœopathy just as good as antitoxin? I personally know a man who has treated thousands of cases of diphtheria, who is connected with the Board of Health of New York. When he was ill himself, he declined to have the antitoxin injected into his own person.

JOHN L. MOFFAT : The old story of enthusiasm ! We do not want to be stampeded by it, and I do not think we will be. As a homœopathic physician, I have sometimes failed to cure diphtheria homœopathically. I have cured diphtheria with antitoxin and have been surprised with its beautiful results. But

such enthusiastic statements really hurt the cause of antitoxin. I am not convinced that the whole experience of the world has been upset and that at last a specific for a disease has been discovered ; such claims have been made and exploded countless times. Antitoxin can cure diphtheria. I have used it. But the writer's statements are too sweeping. The thing for us to do in our homœopathic societies to-day, as scientific men, is to bend some of our energies toward ascertaining whether this remedy is homœopathic, and to ascertain the indications upon which it should be used ; *i. e.*, to individualize it. I do not believe that it is homœopathic. Some claim that it is, because the poison has been diluted through the blood of a horse. We do not treat a disease homœopathically unless our reason for giving the remedy is based on the law of similia ; for this we must know the effects of the drug upon the healthy. As a matter of fact our practice is at different times empiric, allopathic, and homœopathic. As intelligent and honest men we should clearly recognize, each time, which it is.

DRS. CHAS. A. GWYNN and FAUST agreed with Dr. Gorham that antitoxin does cure, and cited cases.

DR. FAUST : We every day use not only homœopathic medicines, but others, and we do cure our patients. We have all cured them homœopathically, but I still contend that with a remedy which has given us the results and assurance that antitoxin has, every man who has had a great deal to do with diphtheria cannot but enforce it.

W. M. L. FISKE : I have passed through quite a number of epidemics of diphtheria in my practice, and I remember at one time I really became quite proud of my success in curing it. During three epidemics, covering a period of five years, I did not lose a case, and I then lost three cases in one family. Comparing my experience, I feel that under antitoxin as many cases die as under real homœopathy. Recent French and German literature tells us that in Paris, where they have been using antitoxin to its fullest extent, the diphtheria death rate has increased ; that in Germany, among the best and foremost physicians, they are losing faith in diphtheria antitoxin ; that the mere presence of the Klebs-Loeffler bacillus is not a reliable indication for it ; that the only true reliance to be placed upon it is upon

the clinical observation of the symptoms taken *in toto*. I have used antitoxin ; I have waited after giving homœopathic remedies, and given it to protect myself in fatal cases ; also I have used it early and felt that, if I had stuck to my homœopathic remedies, they would have gotten the credit. I do not believe it can accomplish any more than the homœopathic remedy can.

A. WORRALL PALMER agreed with Dr. Fiske that the failures with antitoxin are about proportionate to those under good homœopathic treatment.

R. A. ADAMS : We are too eager to try anything that is offered as a specific and to forget the facts demonstrated by a century of experience. Homœopathy gives us the maximum of good, and the minimum of bad results in the treatment of diphtheria ; its statistics are the best, but it does not claim what Dr. Gorham does. In an experience of thirty-five years I have lost only a half dozen cases of diphtheria.

JAY W. CANDEE : Like Dr. Fiske I had grown to believe homœopathy infallible in diphtheria, but my pride had a fall. I have used antitoxin a number of time in the last few years, and have had no failure with it. At present I feel that antitoxin is one of the means to be considered, but I am not prepared to use it as the routine treatment of diphtheria.

L. A. FRAZIER : Within the last four years, I have yet to meet with my first disappointment in antitoxin. I give antitoxin to all my severe cases, but I never stop giving homœopathic remedies, as indicated.

SOCIETIES.

Abstracts, with discussions, of the more interesting papers presented at recent meetings.

AMERICAN INSTITUTE OF HOMŒOPATHY (CONTINUED).

Wednesday.

J. A. CAMPBELL (discussing Dr. Biggar's paper *): I left such a case to come to this meeting. A young married woman, twenty years old, became pregnant and suffered during the months of February, March, and April with the most intense nausea, persistent and uncontrollable, threatening her life. She got through the confinement, but, when she got up, one eye had only $\frac{1}{70}$ vision and the other was absolutely blind. She has been under my care for fifteen days. There is not a single motor or sensory symptom present. Optic neuritis is present in one eye and developing in the other. She is going blind without any question, and yet there is this puzzling lack of symptoms and obscurity of diagnosis. She sleeps well, her appetite is good, and I am at a loss to know what is the matter.

In nine-tenths of the cases of middle-ear infection we have mastoid complication. I have examined a great many mastoids after death, and found disease there never suspected during life. I have had cases where there was not the slightest swelling or tenderness.

I removed from a patient, about twelve years old, a polypus which had its origin in the tympanic cavity. The boy was taken with severe pains in the back of the neck. We called in a surgeon, but as there was no pain, no redness in the mastoid region, he could see nothing and knew nothing but what I told him. That boy died; I knew nothing of it at the time. The post-

* P. 282, this JOURNAL for July.

mortem showed that the mastoid inflammation had broken through and infected the lateral sinus.

To know just when to operate in mastoid disease requires more judgment than is commonly suspected. One man reports fifteen operations, in which several of them were purely hysterical. One case was operated on six times and finally trephined, and yet there was no mastoid disease to be found when they got to the bottom of the cells; it was purely hysterical or nervous in origin. To me that was a great lesson. I have seen the best men and the greatest experts in the world make the most horrible mistakes.

R. S. COPELAND: Examination of the blood will help decidedly in these obscure cases. In brain lesions where there is cerebral softening the blood shows a peculiar leucocytosis: not a simple increase in the white cells, but also an increase in the polynuclear forms of the white cells. Beside the value of blood examination as a means of diagnosis, I believe that it is also of great value in making the selection of a homœopathic remedy when the reproving our materia medica is accomplished. Take, for instance, the prescription of bryonia for stitching pains and aggravation from motion; I believe that an examination of the blood might show arsenic, phosphorus, or zinc, rather than bryonia, to be the remedy.

CHAS. E. KAHLKE: A little fellow had been shot and scarcely felt it at the time. There was scarcely anything to see; only a little blood on the forehead. Seventeen days later he began to have headache; other symptoms followed of graver import and soon he became comatose, with muscular twitches. He died, and at the post-mortem we found the bullet in the left ventricle. If we had gone at that with prophylactic methods and modern appliances that ball could have been located and perhaps removed, and the boy have been saved. A friend of mine, a physician, a man of national reputation, had an attack of grippe that affected his ear; the drum was punctured and inflated. The grippe was followed by an attack of typhoid fever. Septic condition followed, and he died from thrombus in the heart. The post-mortem revealed suppuration of the mastoid cells, with an incipient thrombus of the cerebral sinus. Another case that I saw was in the Vienna clinic. The patient was to be operated

on for paralysis of the left abducens, but before the day of operation the man died of a suppurative meningitis, entirely unexpected.

It takes a good man to tell when to operate and when not. If a case has marked general symptoms, out of all proportion to the local trouble, and there is a reasonable suspicion that the trouble is in the brain, why should we not make an exploratory operation? With modern conveniences and aseptic precautions if you find only serum no harm is done, while, if the suspected pus is found, the chances of the patient are greatly increased. You can point to a great many more cases lost from no operation than you can to an operation made with due care. It is much like appendicitis in that respect. If a case is recognized and operated on in twelve hours after its incipency, we can cure it; but if we let it go on, while we are waiting to see how it is going to turn out,—whether of the catarrhal, suppurative, or gangrenous type,—then we certainly lose it.

AMERICAN OTOLOGICAL SOCIETY; THIRTY-FOURTH ANNUAL MEETING, PEQUOT HOUSE, NEW LONDON, CONN., JULY 16, 1901.

A Series of Mastoid Operations, by Geo. F. Fiske, Chicago.

Three cases of the usual mastoid operation were reported and another case of inflammation of the mastoid with typical swelling and temperature as high as 104° and 105° ; although these symptoms continued nineteen days, because the pain disappeared on the third day operation was deferred and the patient cured.

Operations on the Mastoid, by Robt. Lewis, Jr. (New York), was read by title on account of absence of author.

Hernia Cerebralis following Operation upon the Mastoid, by Emil Gruening, New York.

A female domestic, aged twenty, had had post-scarlatinal O. M. S. Chr. since childhood. Just before being seen she had been struck upon the side of the head, causing an acute otitis, temperature 101.5° , m. t. entirely gone. Although there was no specially localized tenderness over the mastoid, from the other symptoms present it was deemed advisable to operate; upon doing so, the mastoid was found eburnated, indicating a previ-

ously cured acute or serous mastoiditis, and pus was evacuated from the lateral sinus. For a week she convalesced naturally, then her temperature arose; a clot in the jugular vein was suspected, and therefore the vein was ligated. After this operation the case progressed normally for four weeks, when the patient returned to the Hospital (Mt. Sinai) with a swelling over the mastoid the size of a walnut, which, being considered an abscess by the house surgeon, was incised, but instead of pus cerebral fluid exuded, demonstrating it to be a cerebral hernia. The hospital reports were examined, and as every operation for such condition had been fatal the author decided against such procedure, and instead applied flexible collodion to the tumor three times, at intervals of three days, which fully contracted the swelling. It remained so for one month, when the treatment was repeated, with the same result, for the same length of time. This procedure has been repeated about once a month since.

Significance of Herpes in Connection with Mastoid Diseases, by Emil Gruening, New York.

A male, aged forty-one, reported first with disease of the throat, which was followed in two weeks by otalgia, otorrhœa, and rise of temperature; also a simultaneous attack of herpes, located over the supra-orbital nerve. Mastoid disease was suspected, and the usual operation performed, but the patient died. The writer mentions two other exactly similar cases, which also ended fatally.

He concluded that the complication of herpes over the supra-orbital nerve, with mastoid disease, indicates some deeper disease of the central tissues, which results fatally.

Discussion.

B. ALEX. RANDALL (Philadelphia) related a case of operation upon the mastoid which he had performed, after which, on account of rise of temperature, a second operation was necessitated. In this the whole inner table of the mastoid had to be removed, and a cerebellar hernia followed.

Collodion was used successfully in this case. He advised that more thorough exploration should be made than is now customary for intradural complications, even to the puncture of the interarachnoid space. An instrument for the irrigation of

these cavities which he devised was shown. Because of those irrigations being so strongly objected to on account of possible spreading of sepsis, he advocated making a separate opening through perfectly aseptic tissue, and irrigation with normal salt solution.

Sinus Thrombosis, with report of Three Cases, by Hermann Knapp, New York.

Case I. Epidural abscess. In the first operation the inner wall of sinus was accidentally injured with the spoon in cleansing; pyæmia ensued in a few days, and a second operation was made two weeks after the first, in which the whole sigmoid sinus was opened; the aperture being 21 mm. vertically by 24 mm. horizontally. Still later a third operation was necessitated and more granulations were removed, but the patient died. The doctor strongly advised that great care be exercised not to touch the inner surface of the sinus until after everything else is finished.

Case II. An enfeebled woman. In the operation, when cleansing the wound, the probe entered the sinus. On account of unfavorable symptoms developing it was advised to ligate the jugular, but the patient refused. Two weeks later she died of pneumonia.

Case III. A man, aged twenty-six. Operation on the mastoid and an epidural abscess, with ligation of the external and internal jugular. First operation uninteresting, but in the second, after clearing wound of granulations and ligating the external jugular, to find the internal jugular, the external carotid was uncovered for an inch; then the common carotid was bared for two inches, without success, but finally, deep down in the triangle formed by the external jugular vein and facial, the internal jugular vein was found; it being shriveled and filled with grayish matter for a distance of 2 cm. (this appearance made it so difficult to locate). It was ligated on both sides of this cordlike portion, which later was excised. Uneventful recovery. The best manner of ascertaining the contents of a sinus is by aspiration; the possible sepsis after this procedure is best obviated by cauterization of puncture with galvano-cautery.

Discussion.

CHAS. J. KIPP (Newark) also believed the ligation of internal jugular vein a dangerous procedure and related a case of his in

which he found said vein thrombosed, full of pus, and appearing like chamois-skin cord ; a metastatic gluteal abscess followed.

D. B. LOVELL (Worcester) related an exceedingly interesting case of mastoiditis occurring during the desquamative stage of scarlet fever, for which a first and even second operation seemed of no benefit. Three days after the latter a course of anti-streptococcus serum was administered for five days, with resultant cure.

H. A. ALDERTON (Brooklyn) related a case. Upon operation the left mastoid cells were found only moderately congested ; no pus, but a soft pultaceous clot was found in the left sinus, which was removed with but temporary relief. Anti-streptococcus serum was tried unsuccessfully, then the left jugular was ligated, but death ensued. Necropsy revealed a clot all the way down the right jugular, the side of the non-diseased ear, also abscess and necrosis over the right clavicle and the cervical vertebræ.

DR. RANDALL (Philadelphia) advised exploring the sinus with the finger instead of a metal probe (there is more probability of injury with probe than spoon), and reported a case in which, on post-mortem, metastatic abscesses were found in the head, pleura, and pulmonary tissue.

In conclusion DR. KNAPP said we should give more attention to improving the general health, as the result of operation depends considerably upon the constitution, general strength, and age of patient. Some cases of mastoid will recover without operation.

A New Cannula for Syringing out the Middle-Ear Cavities following Ossicectomy for O. M. P. C., by H. A. Alderton, Brooklyn.

It is a specially devised compound curved cannula, which will enter the attic, etc., better than others now on the market.

Discussion.

SAML. THEOBOLD (Baltimore) spoke very highly of the efficacy of the patient's washing out the ear daily with, first, a saturated solution of boric acid and, second, with bichloride 1 to 8000 or 1 to 10,000. He believes this will very often obviate the necessity of operation.

Dr. Alderton considers it imprudent to allow the patient to treat himself after ossicectomy.

Malformation of the Ear.

David Harrower (Worcester) exhibited a photograph and cast of the auricle, which was situated below and anterior to the normal position, almost over the angle of the jaw.

Discussion.

DR. RIEK had seen a similar case.

Some Observations on the Limits of Hearing, by B. Alex. Randall, Philadelphia.

A description of a perfect original Galton whistle was given, and, for comparison, a correct instrument and one sold in instrument stores were shown. It is almost impossible to obtain a whistle giving tones of true quality. The author believes the human ear can distinguish a sound of more than 40,000 vibrations per second, probably as high as 55,000 vibrations. The forks most useful are those giving 50, 200, 500, and 2000 vibrations per second. They should be of standard make, and the practitioners need practice to acquire a uniform stroke—striking the fork on substance of like consistency, with similar force, etc., each time—in order to make the vibrations last about the same length of time.

Cast of the Meatus Auditorius Externus.

A specimen was shown of a perfect cast of the meatus removed from a deaf-mute, aged eight, who had had O. M. S. continuously since scarlet fever in infancy. It was impossible to remove the same in the usual manner; but after syringing the ear twice a day with bichloride, followed by enzymol for a few days, it was removed with comparative ease. A. W. P.

THE AMERICAN MEDICAL ASSOCIATION, ST. PAUL, MINN., JUNE 4-7 1901. SECTION OF OPHTHALMOLOGY.

Treatment of Strabismus; Measures other than Operative, by Edw. Jackson, Denver.

Binocular vision of certain form may exist with high amblyopia or squint. Treatment should commence as soon as the condition is discovered, and be employed both before and after operation (if latter is necessary). Conscious training must supplement the unconscious development interrupted by strabismus.

First we should make it possible for both eyes to work together; then secure normal innervation; third, establish binocular fusion, and finally train in binocular seeing. The first and most important, is to correct the ametropia, and two essentials are the objective method for measuring refraction (skiascopy), and the co-operation of the parents of the little patient.

Treatment of Strabismus ; Operative Measures, by F. G. Clark, Columbus.

The merits of tenotomy and advancement were compared and the frequency of relapses and restriction of ocular movements following tenotomy, and the comparative infrequency of their occurrence after advancement or restriction, were mentioned. Tenotomy really causes a diminution of power of one of the muscles, while, on the other hand, advancement actually strengthens one of the muscles involved.

Strabismus ; Its Treatment.

A. E. Davis (New York) gave the various tests for strabismus and the relative value thereof, before and after operation ; and concluded with a *résumé* of the different methods of operative and non-operative treatment.

The Cosmetic and Visual Results in Squint, by J. M. Ray, Louisville, Ky.

The youth of the patient prevents a study of the visual acuteness before and even for several years after its inception. Judging from a thorough study of this class of cases for the last four years, he believes it is rarely possible to produce binocular vision. The early use of glasses is requisite in all cases of squint.

Concerning the Check Ligament.

J. E. Colburn (Chicago) gave a brief description of the anatomy of the capsule of Tenon, with drawings after Motais, modified to illustrate additional groups of bands, which latter bands are described in this essay for the first time, as far as we are able to ascertain. Two cases illustrative of the author's method of operating were reported.

The Comparative Values of Hyoscin, Atropin, Homatropin, and Scopolamin as Cycloplegics, by C. H. Baker, Bay City, Mich.

This included a very instructive comparative table showing

the number of instillations, strength of solution, mydriatic effect, time required for the completion of cycloplegic, and subsequent duration of the latter.

A Case of Reflection of the Iris, by A. A. Hubbell, Buffalo.

The cause was contusion without rupturing the globe.

Treatment of Heterophoria; Non-surgical Measures.

Geo. M. Gould, Philadelphia, believed that in private practice heterophoria, being in the great majority of cases innervational in character, requires only non-surgical treatment (including the correction of refractive errors).

Treatment of Heterophoria; Surgical Treatment, by G. C. Savage, Nashville.

The writer considers in cases of intrinsic heterophoria, where gymnastic exercises may relieve them, operative measures should be postponed for a long time. Two types of esophoria and exophoria are recognized: the sthenic and asthenic. He concludes with description of the usual surgical procedures.

Table of Paralysis of Ocular Muscles, by H. M. Starkey (Chicago), was a review of the nomenclature of the associated movements of the eyes, and the primary and secondary actions of the muscles producing these motions. The existing diplopia is a means of determining the weakened muscles.

The Extraction of Hard Cataract without Iridectomy.

S. D. Risley (Philadelphia) said this should only be performed in selected cases. The manner of selection and the technique of operations were given.

Relation of Asthenopia to Disturbances of the Digestive System, by John O. McReynolds, Dallas.

A large proportion of the persons who wear glasses could dispense with them if the causes of their asthenopic symptoms were understood and properly treated. Disorders of the digestive system with auto-intoxication frequently produce asthenopia not benefited by glasses.

Ocular Lesions Associated with Constitutional Diathesis.

H. I. Jones (San Francisco) spoke of the relation of the diseases of the eye to constitutional troubles by their embryological,

histological, and anatomical connections, and emphasized the importance to the eye specialists of a thorough knowledge of general medicine.

Mules' Operation, with Cases, by Fr. C. Todd, Minneapolis.

This article gave the indications and contra-indications for performing this operation, and, finally, a review of the experiences of others and himself with it. Reasons for failures, especially respecting the escape of artificial vitreous, were considered.

Report of Two Cases of Orbital Surgery, by Adeline Portman.

(1) Preparation for the late implantation of a glass ball in an orbit some months after enucleation. (2) Transplantation of mucous-membrane grafts for cicatricial deformity of the orbit from a burn.

Atrophy of a Retina, by D. S. Reynolds (Louisville), was a report of two cases which commenced with failing of color perception, followed by scotoma, and finally atrophy with progressive irregular narrowing of the field of perception, ending in extinction of vision. The peculiarities of these cases were the absence of pigmentation and no manifest changes of the choroid or optic disk.

A Case of Blindness Due to Drinking Bay Rum, Compared with Reported Cases Due to Methyl Alcohol and Jamaica Ginger, by H. Moulton, Fort Smith.

Reports of twelve cases of methyl-alcohol amblyopia were compared with the reports of eight cases of Jamaica-ginger amblyopia and the identity of the symptoms and ophthalmic appearances in each indicated. In recently reported cases of essence of ginger poisoning, the toxic agent is wood alcohol or its deodorized product, Columbian spirits. Jamaica ginger essence was not considered poisonous until Columbian spirits were used in its manufacture. Finally, a report of a case of blindness due to drinking bay rum was given.

Some Points to be Observed in the Use of the Perimeter, by Dr. Geo. F. Keiper, La Fayette, Ind.

When examining for colors, the greatest caution should be exercised that the recording color should be exactly like the color

of the target. Furthermore, the personal equation of the operator and of the patient should be considered.

A Study of the Color-Changes in Chromogenic Bacteria.

C. A. Oliver (Philadelphia) showed the direct and indirect effects of color exposure for varying periods of time upon coloration changes, structural peculiarities and pathogenic qualities, and closed with giving the results of a series of control-experiments.

The Value of Excision of the Superior Cervical Ganglion of the Sympathetic in Certain Eye Diseases, by Geo. F. Suker, Toledo.

First the anatomy of the ganglion was given, then the scope and a short history of, the operation, the indications for, and the statistics and technique of, the operation. Finally the opinions of various noted operators, with their results either temporary or permanent.

Herpes Zoster Ophthalmicus with a Brief Report of Five Cases.

W. C. Bane (Denver) defined it as a limited vesicular neuropathic affection with ganglionic involvement. He emphasized the importance of caution in making a diagnosis between this disease and erysipelas. Three of the five cases reported had been previously diagnosed erysipelas, while one had been treated as such in a hospital.

The Corneal Lesions of Acquired Syphilis.

Wm. H. Wilder (Chicago,) pointed out the great infrequency of manifestations of acquired syphilis in the cornea, but said keratitis may often be one of the constitutional lesions of this disease.

Lachrymal Stenosis in Infants, and Its Treatment, by Dunbar Roy, Atlanta.

Included, besides a detailed account of the writer's treatment, the report of a case in which epiphora disappeared immediately after circumcision.

Metamorphopsia Varians, with Report of Three Cases, by Wm. H. Dudley, Easton, Pa.

In these cases no lesion nor refractive aberration obtained, but the phenomenon was observed in uniocular vision. Although these cases were kept under observation several years, no noteworthy change could be noticed.

Injuries of the Choroid, by E. O. Sisson, Keokuk, Ia.

This was a report of a case the peculiarities of which were that the rupture was on the medial side of the papilla and that it was complicated with an old spinal lesion, followed by the medico-legal questions arising from injury.

Spontaneous Clearing of a Cataractous Lens.

Hiram Woods, Baltimore, reported an interesting and peculiar case in which a cataract, advanced to apparent maturity, was found in a myopic eye, but was not removed. Six months later examination disclosed a lens clear enough to permit minute examination of the fundus, which showed evidence of a recent choroiditis. Little over a year later the cataract re-formed, was operated upon, and excellent vision obtained.

SECTION OF OTO-LARYNGOLOGY.

The Treatment of Laryngitis, by O. T. Frees, Chicago.

The author showed an attachment to the ordinary Davidson spray tube—by means of which intra-laryngeal medication is accomplished ; recommending two remedies worthy of study as local applications : ichthyol and methyl violet.

Œdematous Laryngitis, by J. S. Gibb, Philadelphia.

The several types of œdematous laryngitis are : (1) There is no inflammatory condition in the larynx ; the œdema occurs secondary to cardiac, renal, or hepatic disorders or zymotic diseases. (2) Sequela of catarrhal attacks. (3) Those secondary to sepsis from zymotic diseases. (4) Infectious cases : infection direct from pharynx and larynx ; *e. g.*, influenza.

The Relation of the Middle Turbinated Body to Chronic Nasal Diseases, by C. S. Baker, Bay City, Mich.

The main relation which the middle turbinated body bears to chronic nasal disease is as an obstacle to free drainage ; it should be removed, in whole or part, in the following conditions : 1. Polypi. 2. Sinus disease, when pus has no free exit and cleansing is imperfect. 3. Formation of crusts in the upper portion of the nasal fossæ in non-specific cases. 4. Bone hypertrophy, even when the overlaying membrane is atrophic. 5. Contact with the septum ; this region of the septum being especially sensitive. 6. Vasomotor rhinitis.

Operation by scissors and snare was advised, followed by packing the fossæ and removing such packing the second day.

A snare was exhibited, the peculiarity of which is that the cannula moves instead of the wire.

Asthma as a Result of Nasal Conditions, by T. H. Farrell, Chicago.

A large per cent. of cases of asthma is due to nasal causes, the paroxysms in these cases not differing from those due to other causes, and the diagnosis to be made by elimination or exclusion.

Discussion brought forward an advocate of blood changes as the cause of asthma, all cases being due to lymphocytosis, leucocytosis, or anæmia.

The Effect which the So-called Catarrhal Disease of Nose and Throat may have upon the general health, by C. M. Cobb Lynn, Mass.

Diseases of the nose and throat are very frequently the cause, and not the effect, of general diseases. At present we believe that very many diseases are the result of germ infection. In health it is generally admitted that the nasal cavities filter out many disease-carrying germs, while the normal nasal mucus may kill or disarm others; but when these tissues, along with those of the throat, become diseased, the germs may enter the system through these unhealthy tissues, and thereby the nose and throat may become a frequent channel of infection to the general system.

A. W. P.

SYMPOSIA.

Is Glaucoma Less Apt to Follow the Combined than the Simple, Cataract Extraction?

THOS. M. STEWART: It is less apt to follow the combined operation; because the iris plexus of nerves is severed and the vicious circle of nerves in the iris thus broken. This is the reason that iridectomy cures acute glaucoma.

F. PARK LEWIS: Yes; glaucoma is less apt to follow the combined than the simple extraction. In a case of my own the

simple extraction was very satisfactorily performed. Four years later the patient had glaucoma. I found the iris adhered to the cicatrix, obliterating the canal of Schlemm. An iridectomy would have made this impossible.

SAMUEL THEOBALD : I should say yes, though I have had but little personal experience to enlighten me on this point.

H. C. ANGELL : It follows either operation so rarely in my experience that I am unable to form an opinion.

JAS. A. CAMPBELL : I have never had, as yet, a case of glaucoma following cataract extraction. [This is my experience, with both methods.—J. L. M.]

E. H. LINNELL : I have seen only one case of glaucoma after extraction ; that one followed the combined operation. I am inclined to think that there is more danger of such a sequence when an iridectomy is done, on account of closure of the iritic angle by adhesions and inflammatory exudation.

Early Operation for Strabismus

was advised by PRIESTLY SMITH at the Ninth International Congress of Ophthalmology. He has operated on the squinting eyes as early as the first year, and especially insisted upon the importance of correcting lenses, so that the establishment of early binocular vision could be retained.

SAMUEL THEOBALD : Having for years held that amblyopia of squinting eyes is a consequence of the squint—not a cause, as many believe—I have long practiced, and contended for, early operative correction of strabismus. The subsequent use of glasses, when the conditions call for them, I have regarded as of scarcely less importance, and by their help I have always tried to secure binocular fixation, which is the great desideratum (*vide Medical News*, September 4, 1886, and *Trans. Am. Ophthalmic Soc.*, 1886).

F. PARK LEWIS : After refractive correction and orthoptic exercises it should be possible to determine within a year whether the squint is dependent on psychic or mechanical defects. If the latter, the correction should be made as soon as possible—that the former may develop. It is of primary im-

portance that where anisometropia is present, as is usual, the eyes be made focally alike.

THOS. M. STEWART : I do not approve of the early operation. Watch the result in the strabismus operations, which later in life often deviate opposite to the original squint. I see no reason to change from the use of atropia, either in one or both eyes, and the use of the correcting lenses. These have served me well in the establishing of early binocular vision.

H. C. ANGELL : I formerly operated early, but I now resort to a tenotomy much later, and not until the failure of all other means to restore parallelism of the optic axes. In this way I find fewer operations necessary than formerly.

E. H. LINNELL : It seems to me the advantages of the possible establishment of binocular vision by operating for squint at a very early age are more than counterbalanced by the uncertainty of such procedure. I prefer to wait until the habits of attention and accurate fixation are established, so that we can more accurately estimate the relative strength of the various extraocular muscles and the influence of accommodation upon convergence.

JAS. A. CAMPBELL : I do not believe in too early operation for strabismus ; prefer waiting until five or six years old, or even at times longer. But do believe in early correction of existing optical anomalies ; which are most frequently the cause of the deviations.

What is Your Success with Protargol ? In What Strength Do You Use It ? What Do You Consider Its Indications and Disadvantages ?

SAMUEL THEOBALD : Experience has convinced me of the decided value of protargol in gonorrhœal conjunctivitis and in acute trachomatous conjunctivitis. In both of these conditions I have employed with good results a forty per cent. solution for daily application by the surgeon, and solutions of from ten per cent. to twenty per cent. for application two or three times a day by the nurse, or other attendant.

F. PARK LEWIS : Protargol is the most efficient of the silver preparations. It should be used in very strong solution ; thirty

per cent. or forty per cent. is more efficient than weaker preparations. It should not be used so frequently, however. It is especially valuable in suppurative conditions; less so in simple congestions.

JAS. A. CAMPBELL : Am pleased with protargol. Use it from two per cent. to ten per cent. strength, more often four per cent. An admirable substitute for nitrate of silver, zinc sulphate, cupric sulphate, etc. Have not seen any special disadvantages, when indicated.

H. C. ANGELL : I incline rather to silver nitrate; but my experience is as yet too limited to make it of value.

SAMUEL B. ST. JOHN : It is useful, but causes argyria if used long. I use it from two per cent. to five per cent.; indications same as for silver nitrate.

Do You Use or Condemn Ice in Gonorrhœal Ophthalmia?

SAMUEL B. ST. JOHN : I use it.

THOS. M. STEWART : In gonorrhœal ophthalmia I prefer frequent ice-cold bathing of the eyelids to the use of ice compresses. An iced compress, well wrung out, will reduce the temperature of the eyelids for a short time; if moderately well wrung out, it will reduce temperature for from ten to fifteen minutes. The reduction in temperature is for the purpose of checking the activity of the bacteria. Corneal infection in gonorrhœal ophthalmia is more likely to be due to extension of inflammation in the cornea rather than from the use of ice compresses, because it requires frequent changing of ice compresses, at least every five minutes, to keep the temperature down.

SAMUEL THEOBALD : I use iced cloths in adults, but not in infantile cases.

F. PARK LEWIS : Always use ice; even anticipate acute inflammation; I know no more efficient means of rapidly controlling gonorrhœal ophthalmia.

H. C. ANGELL : I use ice in the early stages, and I thoroughly believe in using it.

JAS. A. CAMPBELL : I do not use ice in gonorrhœal ophthalmia.

E. H. LINNELL : I have used ice with satisfaction in the few

cases of gonorrhœal ophthalmia which have occurred in my practice.

As between Hot and Cold Applications in Mastoiditis, Which Do You Prefer? Which Condemn? When and Why?

F. PARK LEWIS: If the ice-water Leiter coil and remedies do not control an acute mastoiditis in its early stages, heat rarely will. Later, when suppuration is imminent, heat may give much comfort, preliminary to operative measures.

SAMUEL THEOBALD: In the early stages of mastoiditis interna I believe cold applications (the aural icebag or Leiter's coil) are useful. Their acceptability, or otherwise, to the patient is a valuable guide to their employment.

THOS. M. STEWART: In the early stages Leiter's ice-water coil is applied, which often reduces the inflammation and pain markedly. If in thirty-six hours the local tenderness has not completely disappeared, no more benefit will be derived from the cold. I have seen equally good results from dry heat, but prefer the cold on account of its action on the growth of the pus germs.

JAS. A. CAMPBELL: Hot applications always. Cold constricts surface circulation, but retards reparative processes. If cold enough to influence the mastoid interior, it is cold enough to injure. As ordinarily applied, it is apt to be intermittent; and then it is positively injurious. Cold is uncomfortable to the patient. Since using warm instead of cold applications I have better and quicker results.

E. H. LINNELL: I have never used hot applications in mastoiditis. In the early stages where an operation seemed almost imperative, my patient has recovered in several instances without surgical interference, under the use of ice in connection with the indicated remedy. I have attributed the recovery in part to the cold applications. I consider it a valuable factor in reducing congestion and inflammation in the early stages, before pus formation.

SAMUEL B. ST. JOHN: Cold for forty-eight hours. If pain and tenderness continue, operate.

What Internal Remedies, if Any, Have You Found Beneficial for Singers' Nodules?

CAPART (Brussels) says, "All these medicinal measures (in-

cluding local applications, astringents and caustics) are inefficient if not harmful," and "Operative treatment (ablation or galvanocautery) is the most satisfactory."

H. W. HOYT : I think I have seen benefit from causticum 3x, and from kali iod. grs. v, t. i. d. I think Curtis's method of voice-training is more reasonable and satisfactory than operative interference.

F. PARK LEWIS : Singers' nodules are often dependent upon faulty voice production, and this in turn upon obstructive hypertrophies, adenoids, enlarged faucial or lingual tonsils. Make correct singing a mechanical possibility before thinking of remedies ; then causticum will prove valuable.

JAS. A. CAMPBELL : I would not be willing to do without both internal and local treatment ; kali bichr., kali sulph., kali mur., kali permangan., and other remedies, have been of service to me. Ablation by galvanocautery is certainly the most rapid and effectual treatment, when it can be used. There are physical conditions and throat conformations making its use difficult, if not impossible.

T. M. STEWART : None. I believe these nodules are the result of faulty vocalization. I have seen them almost disappear after vocal training had been instituted. As a part of my treatment in all such cases I refer them to a competent vocal trainer.

ABSTRACTS FROM CURRENT LITERATURE.

Ballance's Grafting Modification of the Radical Mastoid Operation.—From 3d edition of Thomas Barr's *Manual of Diseases of the Ear*, Glasgow, 1901.

This consists of two operations: the first, to remove the disease, varies in some respects from the Stacke-Schwarze. "The external incision begins above and half an inch in front of the meatus, in the line of the hair, which it follows backwards and downwards; then forward from the line of the hair to the posterior part of the mastoid apex. The skin is raised for a third of an inch toward the pinna, and then another curved incision is made down to the bone; the soft structures being raised as far as the edge of the bony meatus as usual. The posterior wall of the bony meatus is removed, and the antrum, attic, and bony meatus are very thoroughly exposed and cleared out. Ballance lays great stress upon the thorough removal of the outer wall of the attic and the efficient curetting of the attic and antro-tympanic passage. The lining of the inferior wall of the canal is divided vertically [?] with a long and narrow knife, well into the concha, when the incision is carried in a curved direction upward and backward to the level of the commencement of the helix. The concho-meatal flap, formed by the posterior wall of the meatus, is then raised upward and backward and sutured to the mastoid flap by silkworm-gut threads, raw surface to raw surface. After the packing of the cavities with iodoform gauze the external wound behind the auricle is closed by sutures; the ultimate scar being at the line of the hair.

"The second, or grafting, operation may be done in children at the end of a week, but the interval in adults may extend to two or three weeks. In children, unless the wound is foul, the packing need not be removed before the second operation, although

the outer dressing of gauze may be changed. The day before the operation the gauze is removed from the meatus and other cavities, which are irrigated several times with 1:40 carbolic lotion. On the morning of the operation the cavities are washed out three or four times with warm sterile saline solution. The patient being again under a general anæsthetic, the external incision is opened with the handle of the knife, the cavities are exposed, and any exuberant granulation tissue, or other morbid product, removed from the granulating surface. All oozing of blood should be carefully and thoroughly arrested by pressure with pieces of gauze. The graft is taken from the inner surface of the thigh or arm with a large razor, the surface being first washed and then kept bathed in a normal saline solution. The thinner the epithelial layer removed the better, even thin to transparency, and one large graft is better than several smaller ones. The surfaces upon which it is specially important to lay the graft are the roofs of the tympanum and antrum and the inner surfaces of the antrum, attic, and lower tympanum. The graft is carried on a microscopic section-lifter and, beginning at the outer edge of the anterior wall of the cavity in the bone, the thin, almost transparent, graft is then insinuated inward from the section-lifter by a probe. A steel probe with pear-shaped head presses the graft into the recesses of the bone cavities; if possible, no space should be left between the bone and the graft, and, when successful, the definition of the surfaces should be quite clear. Drops of blood or bubbles of air may prevent the due approximation of the graft, and should be removed by suction with a glass pipette. As a protective to the graft Mr. Ballance employs fine pure gold leaf, which is introduced and applied to the epithelial surface in the same manner as the graft. A narrow strip of iodoform gauze is packed into the cavities, one end of the gauze being brought out through the meatus. The wound behind is again sutured and outside dressings applied. For a week the gauze plug remains; when removed, the gold leaf is seen through the enlarged meatus outlining the attic, antrum, and tympanum. The gold leaf is removed three or four days afterward with forceps, when the white surface of the grafted cavity is seen. A gauze packing is again used, and is changed every two or three days, till the healing process is complete, the cavity being then quite dry and light pink in color.

"This grafting method has proven remarkably successful. The after-treatment is, by it, reduced from many months, or even a year, to five or six weeks; resulting in a more complete and permanent cure (see *Medico-Chirurgical Transactions*, vol. lxxxiii.)"

J. L. M.

Bronchial Cysts and Fistulæ.—W. M. L. Coplin.—*Jour. Lar., Rhin. and Otol.*, April, 1901.

A very scholarly article, giving history of the subject, and, tersely, the embryologic formation of these cavities. These are abnormal cavities left between the various tissues of the neck anterior to the sternocleido-mastoid muscles, communicating with either the buccal cavity, larynx, pharynx, esophagus, or cutaneous surface of the neck, sometimes communicating with both, and at other times perfectly closed; containing either atheromatous material, mucus, serum, blood, or only air. They may be classified according to anatomical position, embryological origin, contents, or character of cyst wall. They show their existence simply by their external orifice; or, if open internally into some cavity, mucous liquids may exude. If they only communicate with an internal cavity, air or food may be forced into them—or, if doubly blind and material deposits within them, they appear as swellings or tumors. The article contains information of too minute and exact character, especially in the pathological portions, to allow comprehensive abstracting. A very full description of a clinical case is appended.

A. W. P.

Hæmorrhage from Intact External Auditory Canal in a Case of Hystero-epilepsy.—K. K. Wheelock.—*Amer. Med.*, August 3, 1901.

Dr. Wheelock followed the case for about two years, and twice was able to observe the patient during the attack. The discharge of blood was preceded by headache, sharp pain over and behind the ear involved, and by dizziness. Once the first gush was evidently serum, it looked like "a white fluid." R. E., whisper $\frac{4}{36}$, L. E. $\frac{2}{36}$; at six inches heard, R. very low whisper, L. moderate whisper.

In one week she twice had a free discharge of blood from the mouth with the aural hæmorrhage. There had never been bleeding from the nose. The hæmorrhage seemed to come indiscrimi-

nately from either ear, sometimes in alternation. August 29 there was a free discharge from the left ear, in the doctor's office ; examination of the meatus showed only a very slight congestion of the lining membrane and a thin stain of bloody fibrin on the floor of the canal. The next day the left ear showed a slight abrasion, not covered with a scab, on the floor of the canal. Tympanum pale, but of normal color so far as congestion is concerned. June 13 a gush of serum and blood from the left ear occurred in the doctor's presence. About five minutes later examination of each fundus oculi was nil. Ten minutes later there was another discharge in the presence of two additional doctors ; examination of the ear showed "m.t. pale, meatus slightly pink, and membrana vibrans pearly gray, with white, glistening light reflex." The oozing seemed to come from the cartilaginous portion. After the attack the headache had largely passed away, the face did not look so pinched and drawn, but pain in the back of her head became severe, and she was nauseated. J. L. M.

Adrenalin Chloride Solutions.—Chicago Ophth. and Otol. Soc., April meeting ; *Oph. Rec.*, July, 1900.

The three members who spoke on this subject agreed in praising the 1:1000 solution, although not equal to a ten per cent. solution of the powder, and condemning 1:10,000 as practically useless. The addition of one per cent. chloroform preserves the solution of the powder from putrefaction and is not objectionable for use in the nose ; for the eye a swab, dipped into the solution, is held over a lamp until the chloroform is driven off. Dr. Bulson expects that 1:500 will be the standard for operative work, as adrenalin is non-irritating, non-toxic, and a very powerful heart stimulant. No one spoke of secondary hæmorrhage or of sloughing through ischæmia. (See this JOURNAL for March, p. 105.) J. L. M.

A Case of Conjunctival Tuberculosis.—A. Levy.—*Ophth. Rec.*, July, 1901.

This seemed a typical case of diphtheritic conjunctivitis ; was so diagnosed, and treated without response to the serum. No bacteria could be found. Later, after being discharged improved, the child was brought back to the hospital from the seashore, and tuberculosis demonstrated. After alternations of hospital

and seashore, with slow but marked improvement, he was re-admitted for purulent discharge in the right eye ; examination of which for tubercular bacilli was negative. The entire lachrymal sac was removed ; healing by first intention. Microscopical examination of the lachrymal sac showed a simple dacryocystitis—infiltation of small round cells, grouped at points, in form of follicles. A careful microscopical examination of the entire sac failed to reveal any tuberculous tissue or any epitheloid or giant cells. An examination of the child in December, 1900, seven months after he was first seen, showed complete healing, which is reported as spontaneous.

J. L. M.

Foreign Body in the Trachea.

Wm. T. Henderson, of Mobile, Ala., in *Am. Med.*, August 10, 1901, reports a grain of corn in the trachea of a child aged 5½ years, with no irritation except occasional paroxysms of cough, which gradually grew lighter. A resonance could be heard in the trachea and over the entire chest. On the eleventh day a peculiar sensation was transmitted to the fingers on the larynx when the child was told to cough, due to impact of the corn against the inferior surface of the vocal chords. On taking chloroform for tracheotomy she coughed slightly a few times, when the grain of corn became lodged in the rima glottidis, completely obstructing the passage of air. It was removed by a hasty tracheotomy.

J. L. M.

The Importance of Preventing Chronic Suppurating Ethmoiditis by Proper Local Treatment.—Clarence C. Rice.—*The Laryngoscope*, June, 1901.

“ The middle turbinated region, and hence the ethmoidal cells, are more prone to pathological changes than any other part of the nose, and therefore require closer observation and more judicious care.” The author says that “ the family physician should be warned of the danger of suppurating sinusitis,” and gives the following as some of the causes of this condition : (1) muco-purulent discharge caused by adenoids ; (2) ill-advised nasal douches and overwashing ; (3) overuse of spray, and washes in commencement of acute coryza ; (4) neglect of purulent catarrh in childhood ; (5) irritation caused by pressure on turbinated by deflected septum or when turbinate itself is hyper-

trophied ; (6) procrastination on part of patient in having nasal obstruction, such as polypi, cared for, as any obstruction in this region occludes the ostia of the cells, favoring confined suppuration ; and (7) bungling operative procedure in this region. Greater conservatism in all local treatment, and clean-cut operative work, only for a definite very needful object, with more aseptic precautions are strongly advocated. "The entire purpose of this paper can be stated in two words. First, no nasal disease should be allowed to progress far enough to produce obstruction, deficient drainage, the close contact of the tissues and the retention of muco-purulent secretions, because in these conditions there exists great danger of extension of disease to the sinuses, and especially to the ethmoid ; secondly, all surgical procedures in the nose should be carefully and cleanly performed, that no resulting infection can produce a chronic suppurating ethmoiditis."

A. W. P.

Aphakic Accommodation.

Van den Brugh (Trans. 17th meeting of Netherlands Ophthalmic Soc., May 7, 1900) concludes, through calculation, that the presence of corneal astigmatism (Donders) explains the apparent accommodation of *all* aphaki.—*Ann. of Ophth.*, April, 1901.

J. L. M.

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The reader who notes any omissions or errors will confer a favor by sending corrections to Dr. W. U. Reynolds, 320 Manhattan Ave., New York.

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BOOK REVIEWS.

MANUAL OF DISEASES OF THE EAR, INCLUDING THOSE OF THE NOSE AND THROAT IN RELATION TO THE EAR, FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By THOMAS BARR, M. D., Lecturer on Diseases of the Ear, Glasgow University; Senior Surgeon to Glasgow Hospital for the Diseases of the Ear; Dispensary Surgeon for Diseases of the Ear, Glasgow Western Infirmary; Aurist to Glasgow Hospital for Sick Children; Vice-President of the Otological Society of the United Kingdom; Late President of the Otological Section of the British Medical Association; Late President of the Glasgow Pathological and Clinical Society. Third Edition, Revised and Partly Rewritten, with 236 Illustrations. Glasgow: James Maclehose & Sons, Publishers to the University, 1901; New York: The Macmillan Company. Pp. 429.

The second edition, 1896, has been out of print for some time. The most important changes are in the chapters concerning consequences and operative treatment of purulent diseases of the middle ear. There is a detailed description of Mr. C. A. Ballance's grafting modification of the radical mastoid operation "recently introduced" (January, 1901), by which a more complete and permanent cure is assured in much shorter time—five or six weeks instead of many months or even a year. (See our "Abstracts.") Dr. Barr holds that the post-aural opening of the mastoid operation should be encouraged to close when there is reason to believe that the disease is confined to the antrum and not desquamative in character; also in acute cases. He likes iodoform gauze for most cases, but he has found that in some persons it produces severe eczematous inflammation in the neighborhood of the wound which, in one case, eventuated in erysipelas.

When discussing the anatomy and function of the semicircular canals, the latter is briefly and indefinitely summed up in

favor of Flourens' equilibril theory, but we can find no mention, except hints in one or two illustrations, of the direction of each of the semicircular canals.

The reviewer holds with Flourens and that school; he suggested fifteen years ago * that certain drugs have a selective action upon certain of the canals, or of some part of the respective tracts of the nerve of equilibration or vestibular nerve.

Vertigo as if "everything goes around" points to the horizontal canals=Alum., amm. c., bell., bry., con., cycl., mag. c., merc. bin., sabad., verat. The superior (transverse) canals would seem indicated by "vertigo when turning the head or body" = kali c., lactic ac., ptelea, rhus, aur. met., eupat. perf., eup. purp., dros., stram., sulphur, zinc, "vertigo as if falling to the left"; "sideways"=Amm. mur., cann. sat., benz. ac., nux vom.; and "sensation as if the head would constantly incline to one side"=ferrum, etc.

While there are a number of references to American authorities, Dr. Barr seems to be ignorant of our advances in phono- and pneumo-aural massage, dismissing with a scant page the subject with notice of a few methods of gradual suction.

Two chapters are devoted to the nose and throat affections related to the ear and their treatment.

The typography, paper, and binding are excellent, which cannot be said, however, for most of the illustrations. J. L. M.

PRACTICE OF MEDICINE, CONTAINING THE HOMŒOPATHIC TREATMENT OF DISEASES. By PIERRE JOUSSET, M. D., Physician to Saint Jacques Hospital of Paris; Professor of Clinical Medicine; President of the Homœopathic Society of Paris; President of the Homœopathic International Congress, held at the Paris World's Fair in July, 1900; Fellow of Several Scientific Societies; ex-Interne Lauréat (Gold Medal) of Paris Hospitals, etc. Translated from the Third Revised and Profusely Enlarged Non-published French Edition, with Valuable Additions and Annotations, by JOHN ARSCHAGOUNI, M. D., Graduate of Hahnemann Medical College and Hospital, Philadelphia, Pa.; Formerly Resident Staff Hahnemann Hospital, Philadelphia; Ex-Senior Interne at Ward's Island Homœopathic Hospital, Ward's Island, N. Y., and Five Points Children's Hospital, New York; Physician to the New York

* "Vertigo, Ocular and Aural," by John L. Moffat. *No. Amer. Journ. of Hom.*, November, 1886.

Homœopathic College and Hospital Dispensary ; Member of the American Institute of Homœopathy, the County Societies of New York and Philadelphia, New York Pædological and Materia Medica Societies ; Fellow of the Academy of Natural Sciences, Philadelphia ; New York Medico-Legal Society ; Corresponding Member of the Société Française d'Homéopathie, Paris, etc. [These etc., excite our lively curiosity in the men rather than in the book.] New York : A. L. Chatterton & Co., 1901. Pp. 1088. Cloth, \$7.00. Leather or Half Morocco, \$8.00.

An excellent, practical work, giving his fifty years' experience with the advantage of that of his master, Dr. J.-P. Tessier, who was the pioneer in the introduction of bryonia and phosphorus in the treatment of pneumonia ; paying special attention to therapeutics, and collecting and condensing all that they have found truly practical in our materia medica. Dr. D. Parenteau, of Paris, was collaborator on the diseases of the eye.

Most specialists, and especially exclusivists, make light of therapeutics (much to their patients' disadvantage) and depend upon surgery, topical applications, and glittering generalities. A so-called homœopathic oculist, for example, has no ground for expecting homœopathic physicians to send patients to him rather than to his old-school confrères unless he has knowledge of, and experience in, the homœopathic therapeutics of his specialty—resources of which the others fall short.

Medicinal therapeutics come into play only when the doctor has decided that medicine is to be administered. The remedy may be selected (1) empirically—this is not scientific ; (2) according to the known or supposed pathological condition of the patient—this is ever a mutable factor, and therefore unscientific, if depended upon alone ; allopathically, by the substitution of another disease, comes under this heading. (3) Upon the principle of contraria—there is no contrary or opposite condition (except health) to an individual case of sickness. We can know, and produce, the opposite of a single symptom, but what is the opposite condition of a case of right-sided purulent rhinitis in a lithæmic subject, who is worse about 4 to 8 p. m., has flapping alæ nasi, borborygmus, good appetite, but satiated with one or two mouthfuls, is constipated, has hæmorrhoids and a uric-acid sediment in the urine ? This is not an uncommon picture, but it describes only occasional cases of purulent rhinitis.

If the above describes the case accurately, lycopodium will cure it,—if it be curable by medicine,—and every homœopath would at once agree that lycopodium is indicated, because by the fourth and most scientific therapeutic rule, *similia similibus curantur*, this is the remedy for that individual case.

Known (not supposed) pathological conditions are an important part of the totality of symptoms in the patient and in the drug, when obtainable. But S. S. C., the scientific formula of the therapeutic relation between the two series of facts—the condition of the patient and the effects of the drug—is immutable, despite changes in our pathological and other knowledge.

There is a growing realization that the exclusivist and specialist must bear in mind the patient's general condition.

Although the nose, throat, eye, and ear occupy but forty-one pages of the volume before us, making a very meager showing in the table of contents, they are rich in indications for, and suggestions of, homœopathic remedies.

Dr. Arschagouni has brought the book up to date : *e. g.*, under Cataract, . . . “(Instillation of Succus Cineraria Maritima does not seem to justify the favorable action attributed to it. Clinical verifications of responsible ophthalmologists have only a negative value.—J. A.).”

The book is handsomely printed and bound ; it is not unwieldy. We criticise Dr. Arschagouni and Mr. Chatterton for dropping the diphthong from homœopathy ; let this be the last stronghold against the reformed spelling. Who likes to see the end of the line divide this word into home-opathy? J. L. M.

DISEASES OF THE THROAT AND NOSE. By F. DEHAVILLAND HALL, M. D., F. R. C. P. London, President of the Laryngological Society of London ; Physician to the Westminster Hospital ; Joint Lecturer on the Principles and Practice of Medicine at the Westminster Hospital Medical School, and HERBERT TILLEY, M. D., B. S. Lond., F. R. C. S. Eng., Surgeon to the Throat Hospital, Golden Square ; Lecturer on Diseases of the Nose and Throat, London Post-Graduate College and Polyclinic. Second Edition, with 2 Colored Plates and 80 Illustrations. London : H. K. Lewis ; Philadelphia : P. Blakiston's Son & Co. Price, \$2.75.

The authors are to be congratulated upon producing the most concise, while at the same time quite thorough text-book on the subject we have had the pleasure of perusing. The thoroughness

of the little volume may be appreciated when we note that Dr. Tilley has dealt with forty pathological states of the nose and naso-pharynx, Dr. Hall, fifty of the larynx ; and the two conjointly, twenty-nine of the pharynx. Each disease is considered methodically; the subdivisions being definition, ætiology, morbid anatomy and pathology, symptomatology, diagnosis, prognosis, and treatment ; thereby making the text very easy for reference. Although it is so condensed, still it is couched in a clear, very readable style, and the typography is pleasing to the eye.

A. W. P.

LARYNGEAL PHTHISIS, OR CONSUMPTION OF THE THROAT. By RICHARD LAKE, F. R. C. S., Surgeon Laryngologist, North London Hospital for Consumptives, etc.; Surgeon, Metropolitan Ear and Throat Hospital ; Surgeon, Royal Ear Hospital ; Surgeon for Diseases of the Throat and Ear, Trinity College of Music. With 36 Illustrations, 21 of which are colored. Philadelphia : P. Blakiston's Son & Co., 1012 Walnut Street, 1901. (Printed in England.) Price, \$2.00.

A clearly written, concise consideration of the subject in hand, including all phases, from the interesting ideas of the early writers, as Petit, Sauvée, etc., to the all-important ætiology and treatment. The author purposely confines himself to the local and surgical treatment, because the internal or constitutional has been so thoroughly given in other treatises. The surgical treatment, and that by submucous injections, are fully explained. Not only to the specialist, but to the progressive practitioner, the text of this monograph is almost invaluable, as it has collected together everything upon this subject, with the addition of many clinical reports ; but the colored plates possess the drawback usual to such attempts at reproducing pathological coloring, in being altogether too vivid in hue.

A. W. P.

A splendid location for a homœopathic physician, information of which can be obtained by addressing Lock Box 244, Uhrichsville, Ohio, or by addressing Dr. Thomas M. Stewart, Secretary of Pulte Medical College, 704 Elm Street, Cincinnati, Ohio.

NOTICE.

The New York State Homœopathic Medical Society will hold its thirty-fifth semi-annual meeting promptly at 10 A. M., Tuesday, September 24, and at 9 A. M. on the following Wednesday and Thursday; adjourning at 1 P. M., in order that the afternoons and evenings may be devoted to the Exposition, Niagara, etc.

Headquarters at Statler's Hotel, Elmwood Ave., adjoining the Exposition grounds, and thirty minutes from the depots. European plan, \$1.00 to \$3.00 a day for rooms; American plan, special rates of \$2.00 to \$3.00 per day, which means rooms with breakfast and luncheon or breakfast and evening dinner. These rates are for each of two persons; all rooms are double. In suite of two rooms and intervening bath, each \$4.00.

The physicians of Western New York have arranged an entertainment on the Midway for the members and their friends on Wednesday afternoon.

CORRECTION.

On page 277 of our July number, ¶ 3, it was an obvious error to refer to p. 247 for Dr. Palmer's paper.

THE JOURNAL OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

EDITOR,
JOHN L. MOFFAT, M. D.

ASSOCIATE EDITOR,
A. W. PALMER, M. D.

THE NECESSITY OF CYCLOPLEGICS IN THE CORRECTION OF REFRACTIVE ERRORS.

CHAS. DEADY, M. D.,
New York.

THE writer presented a paper* in which the above subject was considered at the June meeting of the American Homœopathic Ophthalmological, Otological, and Laryngological Society. An abstract of that paper, with the other proceedings, was printed in the July issue of this JOURNAL, and not having been able to be present to participate in the very interesting discussion which followed, the author desires by this means to answer some of the friendly criticism which was offered during the debate on his paper and that of Dr. Linnell, who took the negative side of the argument. Let it be understood at the outset, however, that these remarks are dictated by no sense of annoyance or impatience under adverse criticism, but are due solely to the intense interest felt by the writer in this most important subject, and in the hope that they may prove of some interest to the members of the society and to the readers of the JOURNAL.

The position taken in the paper above alluded to was that when a patient consulted an expert in a medical (or

* Will appear in *The Hom. Eye, Ear and Throat Jour.*, the official organ of that Society.

indeed any other) specialty he was entitled to a thoroughly exhaustive examination, in which all the skill of the physician and all the aid to be obtained from mechanical and other adjuncts should be used to obtain as nearly as possible absolute accuracy in diagnosis and treatment.

One of the gentlemen present stated that as his experience with refractive cases increased, he used cycloplegics less frequently. As a result of the experience of the writer in the clinics of the New York Ophthalmic Hospital, covering a period of exactly twenty-five years, the reverse is the case.

In the first ten or twelve years, from 1876 on, the routine practice was to fit glasses by the ordinary means of examination, and the cycloplegic (then atropin only) was rarely used. In his clinic at the present time the accommodation is paralyzed in the large majority of cases, the exceptions being presbyopic cases and those where the business of the patient precludes the possibility of interfering with the reading power.

This change of method, involving much additional labor, has not, as may be judged, been made for pleasure, but is the result of hard knocks in the past, which have impressed the idea that it is wise to do the best thing first, and finish the matter.

It is stated in the discussion that if we practice the indiscriminate use of cycloplegics we grow to rely less on the objective tests. What objective tests are reliable without cycloplegia? Certainly not the ophthalmometer. That instrument gives us the axis only of astigmatism, and not infrequently is in error even in that respect. Not retinoscopy. We have the authority of the best writers on the subject, that in order to get accurate results by this method the ciliary muscle must be paralyzed. Not the estimation of refraction by means of the ophthalmoscope. He is a good man who can come within a quarter diopter of the amount of astigmatism by this method. When we are prescribing eighth diopters such approximation, even if always possible,—which is far from being the case even with those

most skilled in such use of the instrument,—can hardly be considered sufficiently accurate for expert work.

If all of these methods fail us, what have we left? Simply the lenses and test card, which are used by the optician whose efforts at fitting glasses we justly decry.

The question is not, Shall we use these tests *or* the cycloplegic. We must use them *all*. In the clinic of the writer the card test is first used, the refraction is judged by the ophthalmoscope for immediate diagnosis, then the cycloplegic is used, followed by retinoscopy and the proper fitting of the glass, the latter being deferred until after the recovery of the ciliary muscle. By this means these charity patients receive as careful treatment as is possible in the best class of private patients, and it pays, for we have very few complaints afterward and very little of the constant changing of lenses which formerly obtained.

The objection that a knowledge of the total amount of error of refraction may lead us to give too strong a glass is hardly tenable, as no man with judgment should be misled in this respect, and in the case of the writer has absolutely no force; for, as stated in the former paper, the important reasons for suspending the action of the ciliary muscle are, first, to learn the exact *axis*, and second, the exact *amount* of astigmatism. The total amount of hyperopia is of little importance except in rare cases, or where squint is present, as it is never prescribed otherwise, the rule being to give the total amount of astigmatism if the patient can see well with it, and in addition only that part of the hyperopia which is manifest. Of course special cases call for special modifications, but this has been found to be a good general rule by long experience.

In the opinion of the writer it is fully as important to use a cycloplegic in myopia, whether with or without astigmatism, as in the opposite form of error. The dangers of giving too strong lenses in myopia are well known, and such risks should never be incurred in order to spare the patient a trifling annoyance from the use of drops.

It seems to have become, with those who use cyclo-

plegics, a question of selection between atropin and scopolamin. Homatropin has its advocates, but in our opinion is much less reliable than the other drugs, and should not be used, if the alternative is possible, where exact results are desired. It is noted that as between atropin and scopolamin, at least one of the speakers in the discussion placed atropin first in the order of usefulness.

Some years ago when scopolamin was first used, the writer made a series of experiments in his clinic in the New York Ophthalmic Hospital to ascertain the relative potency of the two drugs. Several suitable patients were selected, and each was subjected to a thorough single instillation of one per cent. atropin sulph. solution; an hour later the refraction was carefully taken and recorded. After complete recovery from the atropin the same patients were tested again under precisely identical conditions, except that a one-half per cent. solution of scopolamin was substituted for the atropin. In no case did the atropin reveal a greater error than the scopolamin, and in some the latter drug did show a higher degree of error than that found under atropin. In addition to this we felt satisfied from these tests that scopolamin acted more quickly, produced fewer symptoms of irritation, and that recovery was more rapid.

So conclusive were these experiments that we discarded atropin at once, and have since used scopolamin in the clinic for the estimation of refraction, to the exclusion of all other drugs. These tests were, however, made with a one-half per cent. solution; with our experience in view we should not care to rely on the one-tenth per cent. solution which some of the gentlemen advocated, without further experimentation. Personally we see no reason for a change of strength, for, of the four drugs which we have tried thoroughly in the clinic,—atropin, duboisin, hyoscyamin, and scopolamin,—the latter has in our hands caused infinitely less systemic irritation and fewer disagreeable symptoms than any of the others.

It must be remembered, however, that we use only

the best preparation (Merck's). We have frequently known of cases where serious symptoms have been caused by solutions of the drug containing impurities.

So long ago as 1893 Dr. Rählmann* stated that scopolamin excelled, "as a mydriatic and antiphlogistic, all other tropeins in use." After using the drug constantly for several years, we believe the statement to be absolute truth.

In the paper first referred to the statement was made that to obviate the chromatic and spherical aberration and the irregular corneal astigmatia often uncovered by dilating the pupil, the author made use of a metal disc having a central perforation of the size of the natural pupil. To this exception was taken that such a diaphragm had not the same effect as the action of the iris. While this is in a sense undoubtedly true, the fact remains that numerous experiments covering a long period have demonstrated to our entire satisfaction that the use of such a diaphragm, with proper care, while affording valuable assistance in many cases, does not vitiate the result.

An important consideration respecting cycloplegia, which should not be forgotten, is its relation to the subject of heterophoria. Careful observers long ago noted the fact that exactitude in the fitting of lenses exercised a most important influence in the anomalies of the extrinsic muscles; so much so that in many cases condition of muscular imbalance, which were apparently responsible for most distressing symptoms, were frequently ameliorated and sometimes wholly removed when refractive errors were accurately compensated by well-fitting glasses. The writer has observed this frequently, and for some years past has made it a practice, where the amount of heterophoria was not too large, of first prescribing lenses and waiting for a time before attempting to treat the muscular anomaly, the result being that in many cases such after-treatment became unnecessary.

We should be glad to hear from our colleagues, through

* *Klinische monatsbl. für Augenheilkunde*, February 7.

the pages of the JOURNAL, their opinions on this subject, which is too important to be dismissed in a discussion at any meeting. By going over the pros and cons in well-considered papers, valuable conclusions may be reached.

110 West 48th Street.

PRELIMINARY NOTE ON THAT FORM OF TOXIC AMBLYOPIA PRODUCED BY TOBACCO.

F. PARK LEWIS, M. D.

Buffalo, N. Y.

FOR more than a century the fact has been recognized that under certain conditions tobacco taken into the system exercises a pernicious effect upon the eyes. During the last thirty years the subject has been studied with great care; yet, although smoking is almost universal and the opportunities for observation practically unlimited, although there is no toxic substance so commonly and regularly consumed by mankind,—unless it be coffee,—our exact knowledge concerning its pathogenetic effect has been by no means accurately ascertained.

It was the intention of the writer to present some notes on the rather unusual effects of this drug, with the intention of adding to a discriminating knowledge of its morbid influence on the eye, but a careful study of the problem as it presents itself demonstrated two exceedingly interesting and important facts that have seemingly been overlooked in our previous studies of this question.

We have learned that among the enormous number of smokers a very small proportion become amblyopic. Hirschberg's statistics say 0.6 per cent. of the whole number of cases. "During sixteen years of a rich clinical service," says DeSchweinitz, "Groenouw recorded 185 cases of intoxication amblyopia." In these cases, too, most of them were alcoholics, and no discrimination was made.

Among the Turks, with whom the amount of tobacco

consumed is enormous, amblyopia is practically unknown. The Turks on the other hand are of all people the least given to the use of alcohol; it is indeed forbidden by their religion. Now in view of the fact that alcohol alone will produce a condition of the optic nerves very similar to that which is ascribed to tobacco, we cannot escape the conclusion that the very small proportion of amblyopes as compared with the large number of tobacco users would be still further reduced if it were possible for us to discriminate and select those only who were not given to the use of other intoxicants.

A further fact which is of importance is this: among those who are users of tobacco and who give evidence of disease of the optic nerve are those whose daily consumption of this substance is no greater, or in some cases even less, than is that of others whose vision remains unaffected. This may be ascribed to idiosyncrasy. It is much more likely to be due to another cause to which no consideration has heretofore been given, but which cannot fail to have an important bearing.

I refer to auto-toxic conditions already existing in the system and dependent upon other causes. It is a well known fact, though of recent acceptance, that many of the diseases of civilized life are due to a failure on the part of the system to maintain a normal balance in the increment and excretions; sedentary lives, excess in eating, or persistent over-draughts on the nervous energy prevent the establishment of that absolute equipoise that is essential to health. The blood becomes surcharged with toxicants that alone are sufficient to prevent the tissues of the body from receiving that nutriment essential to make them resist attack.

A further toxic substance is persistently introduced. The nerve centers in a special way are attacked by this latest poison, and we immediately assume that all of the nervous phenomena which present are the result of the nicotin, or of some of the numerous piridin bases (it is immaterial), instead of being the result of the combined attack

of the auto- and extra-toxic substances which are brought together in the body.

The importance of the bearing of this side of the subject will be at once apparent. We cannot make a discriminating analysis of a single case until we shall first have learned whether or not arterio-sclerosis be present, whether the elimination of urea is sufficient, whether the liver and lungs and skin are doing their work efficiently and thoroughly.

Therefore most of the available studies are unsatisfactory and incomplete. They give gross lesions which are produced not only by tobacco, but by a series of toxic substances of which the tobacco, important as it is, is but one. If then we would study this subject carefully in the light of modern science, we must begin at an earlier stage with a more complete knowledge of our data, and finally,—and this is the second point of importance,—*with more accurate instrumentation.*

Until recently the perimeter has been a rarely used instrument in the usual ophthalmological outfit. This has been due to the fact that it has been so awkwardly constructed and so tedious in its manipulation, that only in those cases in which the field of vision was essential to a diagnosis was the time taken to make the necessary chart.

Moreover, a field of vision taken by daylight is not always perfectly accurate and entirely trustworthy, and not nearly as fine in detail as one taken in the dark. In the broad glare of the sunshine the number of diverting objects that are necessarily thrust in view distract the attention from the one small colored spot by which the retinal perception is determined. The perimeter devised by Dr. Skeel has been so much improved in its mechanism, however, that one single further modification will make it of great value, not only for pathological, but for physiological investigation.

In this instrument upon a black semi-circular revolving band is placed a disk having square openings of 5 and 10 mm. respectively, which may be illuminated at will by an electric light to give white, blue, red, green, and yellow.

The improvement which the writer will suggest was first

observed in the clinic of Dr. Wilbrandt of Hamburg. It is that the band be replaced by a hollow globe of dead black. The examination is to be made, of course, in a dark room with no other illumination than that which is shown through the square opening in the disk.

This will allow the widest expansion of the pupil, and therefore the largest field. The rest given the retina by the darkness will increase the perceptive power to the largest degree. It will then be possible to make accurate analysis of the visual field such as will give valuable information concerning not only the retina, but as well often of the brain and spine.

The writer is able at the present time to present only this preliminary note, with the hope, however, that later, with a fuller knowledge of the general pathology, a clearer discrimination of the toxæmias present, and a finer instrumentation it may be his pleasure to make some studies of that form of toxic tobacco amblyopia that only have a scientific value.

454 Franklin Street.

PERIMETRIC VISUAL FIELDS—A SUGGESTION.

JOHN L. MOFFAT, M. D., O. ET A. CHIR.

New York, Brooklyn Borough.

“THERE is perhaps no examination in ophthalmology which is surrounded by so many possibilities for inaccuracy” as is that of the visual field.*

Scientific accuracy would suggest that all perimetric fields of vision be taken and reported in as uniform a method as possible. Perimeters are, and will continue to be, of different sizes, but each chart could and should be accompanied by a note giving radius of the perimeter, size and kind as well as color of test object, and the size of the pupil, or at least expressing the size of the test in terms of the radius; test card, r/x ; or, test, illuminated glass, r/x . In successive fields of the same eye this would not, at first thought, seem to be necessary; but some at least of the changes in the field might be due, as F. Park Lewis has suggested,† to a varying size of the pupil on the different occasions.

Endorsing Dr. Lewis's recommendation of a large pupil and colored lights instead of cards, the purport of this note is to suggest that

The diameter of the test object should bear a definite ratio to the radius of the perimeter, and should be so expressed, after the manner of the stops of a photographic lens.

With the same illumination a test card or colored lighted glass, 10 mm. square,—preferably 10 mm. in

* De Schweinitz, *Phila. Med. Journ.*, September 21, 1901, p. 488.

† See “Reports of Societies,” p. 421 of this JOURNAL.

diameter,—in a perimeter of 30 cm. radius is equivalent to one of but 8 cm. in a smaller instrument, the radius of which is 24 cm. For instance:

RADIUS OF PERIMETER.	DIAM'T'R OF TEST	MM 10	MM 8	MM 6	MM 5	MM 3	MM 2
30 cm.	Formula	r/30	...	r/50	r/60	r/100	r/150
24 cm.		r/24	r/30	r/40	r/48	r/80	r/120
20 cm.		r/20	r/25	r/33	r/40	r/66	r/100

1136 Dean Street.

SOME REMEDIES FOR OTORRHŒA.*

JOHN L. MOFFAT, M. D., O. ET A. CHIR.

Brooklyn, New York.

WHEN aural suppuration is once established, of course surgical procedures must be employed—free vent for the pus, asepsis, removal of necrotic tissues, and *dryness* of the parts. To prevent suppuration the prolonged application of cold (sometimes of heat) and often a free incision are invaluable measures.

The profession has run the gamut in the treatment of acute and chronic otorrhœa, from internal medication, without even examining the ear, down, or maybe up, to entire reliance upon local treatments and operations.

Happily both these extremes are about to pass, and aurists are coming to the recognition that internal medication is as essential in otology as in the treatment of other organs.

The tissues of the ear are as susceptible to drug action as are the similar tissues of other parts of the body. Local treatments or operative measures enable the internal remedy to act more promptly and efficaciously, but on the other hand the proper medicine will insure the rapidity and permanence of the beneficial effects of an operation. As

* Presented to the New York State Homœopathic Medical Society, September, 1901.

in surgery generally, an operation does not cure—it merely puts the part of the body involved into a more favorable condition for recovery, which may then be either spontaneous or aided by internal medication.

In August, 1892, a boy ten years old came to me for otitis media suppurativa dextra, of seven years' standing; there was a large perforation, and offensive, bloody, thick, yellowish discharge. Operation was out of the question, as he was white and anasarcous from so bad a mitral insufficiency that it did not seem possible for him to live long. Hydrogen dioxid was used to keep the ear as clean as possible, and the main reliance was placed upon medicines, his principal ones being tellurium, kali sulph., kali phos., elaps, and ars. iod. Progress was satisfactory, but slow, slight recurrences requiring occasional attention at intervals of months for a couple of years; but he finally called himself well. Bryonia, arsenic, and gelsemium had been called for at times, and finally cardiac compensation was so well established that he could play the violin and ride a bicycle.

Chronic suppurative otitis media does not get well spontaneously, and I do not believe that hydrogen peroxid locally is sufficient in itself to cure it. As to adjuvants, I have had the best results with hydrogen dioxid, electrozone, pyoktanin blue (in fresh solution), formalin, bichloride, and succus calendulæ, wiping the accessible parts dry, and sometimes a light dusting of powdered boric acid or of calendulated boric acid. Each has failed, and each has proven efficacious when others failed.

INTERNAL MEDICATION.

Pulsatilla is good for profuse, bland, thick, yellow or yellowish-green muco-purulent discharge, or pus. There may be itching deep in the ear, or vertigo, maybe nausea. Pains violent, as if something were forcing outward, or darting, tearing, and pulsating. Deafness and roaring. Aggravation from warmth, in the evening till midnight. Relief by cool air.

This remedy is especially useful in negroes and children, after scarlatina, in acute cases, before or just after the appearance of a discharge.

Hepar (calcium sulphide) is the first remedy usually thought of for acute or chronic suppuration, but is not always the right one. Give it for fetid, thick, purulent discharge, with great sensitiveness to touch and ever-ready bleeding. Relief from warmth—from wrapping the head warmly. There may or not be pains in the ears; if present, they are sharp.

The patient is probably irritable, with hasty speech and actions; he is sensitive to the open air, feels cold when others present do not.

Hepar follows *pulsatilla* well, and is especially useful if the patient has taken a great deal of mercury.

If given in material doses (one-tenth grain) too soon, it will probably precipitate a suppuration that might otherwise have been avoided.

Dr. H. P. Bellows gives *hepar* if the pain continues and the discharge seems inadequate after incision, or spontaneous perforation of the drumhead—the leading indication being scanty discharge, with localized tenderness.

Mercurius (*solubilis* or *vivus*) is suggested by pulsation of the pus at the inner end of the external auditory meatus. The discharge is thinner than under *puls.* or *hepar*, is excoriating, bloody, offensive; may have a metallic or brassy odor. The pains are dull, constant, or stitching; tearing, with soreness or burning. The patient perspires much, without relief; is worse from warmth, and at night. Of course there is deafness; sounds vibrate in the ears; the tinnitus is ringing and roaring, pulsating. Polypi.

Silicea is perhaps more frequently useful in persistent chronic otorrhœa than any other remedy, especially after operations, if the bone is affected. It promotes repair of the drumhead after suppuration has ceased.

The discharge is foul, thin, often scanty, or bloody. There may be sharp, drawing, or stinging pains; hissing, singing, or roaring tinnitus; itching in the ears, relieved

by digging, scratching, or cleansing the ears. Relief by wrapping the head warmly.

With deafness, particularly for the voice, there is oversensitiveness to loud sounds. In a prolonged case it may be well to change for two or three weeks to lapis albus, which is the silico-fluoride of calcium.

Tellurium is very valuable, even if the odor of the discharge is simply offensive, instead of like brine or fish pickle. The m. t. is dark purple, with vesicles like phlyctenules, suppuration and perforation. The discharge is thin, watery, very excoriating and irritating, causing redness and vesicles or pustules wherever it touches. The ear itches, with painful throbbing in the external meatus.

Kali phosphoricum.—Offensive acrid pus, dirty, brownish, watery. Deafness, blunted perceptive power; tinnitus, humming, buzzing—with weakness and confusion.

Kali sulphuricum.—Earache, with thin yellow discharge. Sharp cutting pain under the ear; tensive, stitching pain under the mastoid process. Polypus in meatus. Worse in heated room.

Kali bichr.—Stringy, ropy, yellow discharges, especially if associated with nasal catarrh, or rheumatic pains in various parts of the body, which alternate with nausea or indigestion. Indolent ulceration.

Kali mur.—Chronic suppuration; stringy, white discharges. Abundant granulations or hypertrophied mucous membrane of the middle ear. The most valuable single remedy for the deafness following purulent or catarrhal otitis media.

Elaps.—A thin, yellow, green, maybe bloody, discharge, that is somewhat irritating; it stains the pillow-case clear green. The mucous membrane may be cracked and dry.

Psorinum is to be given to patients subject to glandular and cutaneous affections, who do not respond to the apparently indicated remedy.

The obstinate otorrhœa is thin, ichorous, and extremely offensive. There is an offensive odor to the whole body, and often itching.

Thuja, if the patient has had gonorrhœa or has been vaccinated. The discharge is bland, thick, smelling like putrid meat.

Calcarea picricum has been found useful for prolonged or recurrent cases, with muscular weakness and want of will-power.

Ars. iod., aurum, calc. phos., calc. iod., hydrastis, kali: iod., lycopodium, mezereum, nitric acid, petroleum, and sulphur will also well repay study.

The condition of the naso-pharynx and Eustachian tube must always be taken into account, and the totality of the symptoms should be covered, if possible ; an unexplainable and otherwise unimportant symptom may determine the choice of the successful remedy. As hinted in the beginning of this paper, justice is not done to the patient if the practitioner neglects any measures that will conduce to a quicker and more permanent cure.

1136 Dean Street.

TUBERCULOSIS OF THE UPPER AIR TRACT.*

J. HENRY HALLOCK, M. D.

Saranac Lake, N. Y.

IN looking over my case book of several hundred cases I am surprised at the comparatively few who have had any localized tubercular disease of the upper air tract, excepting the larynx.

Nine-tenths of all tubercular patients who have sufficient pulmonary lesion to be recognized will have an aggravated catarrhal condition of the nasal pharyngeal and laryngeal mucous membrane, and as the disease advances this usually becomes more annoying, especially the pharyngeal and laryngeal irritation, and in many instances this requires treatment to secure any degree of comfort to the patient. But this, no matter how aggravated, is not tuberculosis—it is only a congestion brought about by interference with the circulation plus the irritation from the poisonous discharges which come from below.

During my five years' experience with throat and lung work in the Adirondack Mountains, I do not recall a single case of tuberculosis of any portion of the nose or mouth, and only one of the tonsil and two of the epiglottis. Bosworth in an immense hospital experience reports five.

About ten per cent. of all my cases have laryngeal tuberculosis. In a small percentage of cases this is the first recognizable symptom, though I doubt if it is ever the primary lesion. But in most cases it follows or is found with a recognizable lung disease. It is known by all

* Read before the New York State Hom. Med. Society, September, 1901. .1

that consumption is not an inherited disease. But it is equally well known that the existence of a special diathesis is necessary, otherwise the disease will not be readily contracted. But the condition called a tuberculous diathesis is inherited, and such people easily fall victims to the disease.

The direct cause of a tuberculous process in the larynx is lodgment or colonization of tubercle bacilli, and in a great majority of cases this follows a similar process in the lungs.

Laryngeal tuberculosis occurs most frequently in adult life, the majority of my cases occurring in patients between thirty and forty years of age.

Its first manifestation in the larynx is usually a circumscribed deposit in one side of the organ. Most frequently the primary invasion is in the membrane covering the arytenoid cartilage, but it may develop in any portion. From this first deposit it extends laterally until the entire larynx may become affected, or extension may take place by auto-inoculation.

The first symptom is usually a hoarseness or some interference with the voice due to some disturbance of the vocal cords, and as the cords are invaded by the disease the voice becomes more and more impaired. If the arytenoids are much swollen there is usually difficulty in deglutition. As the disease progresses the pain increases, but is usually not acute unless it extends to the epiglottis.

Cough usually comes early in the disease—sometimes, of course, due to lung involvement, yet always aggravated and made worse by the sticky discharges and irritability of the congested or ulcerated larynx. A feeling of swelling or fullness in the larynx is usually quite an early symptom, and what this annoyance can be, even where acute pain is not present, one can have but a faint conception unless he has been similarly afflicted.

It was one of my first symptoms, and as it would not yield to remedies it made me suspicious, and caused me to have my expectoration examined. The report of the

microscopist made me less happy than ever, for tuberculosis was established beyond a doubt. Tubercle bacilli were found in large numbers, and destruction of the tissues was taking place, shown by the amount of elastic lung fibers present. But this irritation in my larynx was so much *more* annoying than anything else, that I promised myself if I could get rid of it I would never scold about anything else that might develop.

Usually the subjective symptoms of laryngeal phthisis are so well marked, especially in those cases where there is well-established pulmonary disease present, that a diagnosis can be made with certainty, and one expert with laryngoscopic examinations should be able to diagnose the disease early after the first deposits have taken place.

The laryngoscopic examination will usually show the club or pear-shaped swelling of the arytenoids. Sometimes we find one larger than the other, but more frequently they are enlarged evenly and present the same appearance. The ventricular bands, when diseased, are usually so on but one side.

At an early stage of the disease the membrane presents a dull yellowish-gray tinge, and has an opaque appearance. But within a few weeks the membrane becomes studded with minute yellowish dots, which mark the development of tubercular nodules.

As the disease progresses the tissue begins to break down and ulceration forms, and there is destruction of tissue, and the edges look ragged and worm-eaten. But the adjoining mucous membrane is so anæmic that it is frequently difficult to tell where the ulceration ends. Tubercular laryngitis is always a grave disease, following, as it usually does, upon a lung involvement. Poisoning of the whole system sometimes takes place very rapidly after it develops, and it is always a place to be watched to prevent rapid absorption of the tuberculous poison.

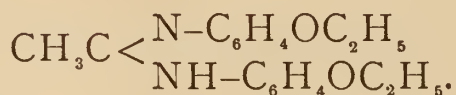
Do such cases get well? Yes. I have them in my own practice, and the reports of brother physicians confirm the statement. But its treatment will be the subject of another paper.

HOLOCAIN—A NEW ANÆSTHETIC.*

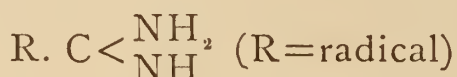
BY DRS. R. HEINZ AND C. SCHLOSSER.

Munich.

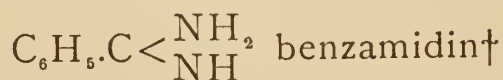
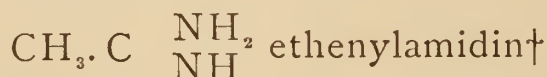
HOLOCAIN is the p-dieth-oxy-ethenyl diphenyl-amidin hydrochlorid



One of us (Heinz) has investigated this substance pharmacologically, while the other has tested it as to its applicability in ophthalmological practice. The substance is closely related to phenacetin; it arises from a combination of acet-p-phenetidin and phenetidin under the influence of dehydrating substances. The combination belongs to the class of amidines:



of which numerous representatives have long been known; for example, the simpler



The substance is a strong base, with a melting point of

* Translated from *Klinischer Monatsblätter für Augenheilkunde*, April, 1897.

† These two substances, the radical combinations of the fatty and aromatic series respectively, have, according to researches, no anæsthetic action; they rather wholly resemble in their action the nearly related combination guanidin.—HEINZ.

121° C., insoluble in water, but soluble in alcohol and ether. The chlorid of this combination ("holocain") is a substance having a neutral reaction and crystallizing well. It dissolves slowly in cold, but readily in hot, water, although more or less of it recrystallizes after a longer or shorter time, according to the temperature, in the cooling of strong solutions (four per cent. to five per cent.); weaker solutions (one per cent. to two per cent.) remain unchanged after an indefinitely long period.

Pharmacological studies of holocain have shown the following results: A one per cent. solution placed in the eye of a rabbit causes no phenomena of irritation. The animal does not compress his eyelids nor make any efforts to dislodge the substance by wiping movements, etc.; on the other hand, it remains tranquil. A five per cent. solution sometimes causes blinking for a very brief period, together with reddening of the conjunctiva. Holocain, in substance, when dusted into the eye, causes more irritation, with compression of the eyelids, lachrymation, and redness and swelling of the conjunctiva. In the dog the application of one per cent. to five per cent. solutions to the eye causes at the most only a transitory blinking, no compression of the eyelids, no defensive movements. A short time after the instillation of holocain a complete loss of sensation may be demonstrated in both cornea and conjunctiva; neither contact, puncture, incision, or burning are perceived. In rabbits the least concentration of a solution, one instillation of which will bring about complete anæsthesia, is two-tenths per cent. If a one per cent. solution is used complete anæsthesia is produced as soon as fifteen to twenty seconds, and the effect persists for twelve or fifteen minutes. In dogs the concentration necessary to secure complete anæsthesia must be greater, as must also be the duration of the action; only a four-tenths per cent. or a five-tenths per cent. solution produces complete anæsthesia. After instillation of a one per cent. solution some forty seconds elapse before the appearance of complete insensibility. The effect, therefore, appears to be

maintained for a longer period—twenty minutes or more.

A one per cent. solution of holocain is more than sufficient for the production of complete anæsthesia. This result is brought about by the paralysis of the sensory nerve-endings, and is probably not at all due to secondary ischæmia, genesis of cold, etc. This may be shown experimentally upon the bloodless reflex-frog. A frog with its brain destroyed and heart excised is hung up with its hind legs spread apart by a suitable device. One leg is dipped in one-third per cent. hydrochloric acid (this is a concentration which excites the sensory nerve-endings of the frog without causing any permanent injury to the tissues). After two or three seconds the frog draws the extremity so treated from the acid solution amid violent movements of protection. The same extremity, or the opposite one, is dipped in one per cent. holocain solution, wiped dry and rinsed off with six-tenths per cent. solution of sodium chlorid, and again dipped in the hydrochloric acid solution. If the extremity has been exposed to the holocain for a brief period only, it is withdrawn by the frog after five, eight, or twelve seconds. If the holocain has had one minute to act upon the extremity, the latter is not withdrawn at all. It is, therefore, proven that holocain paralyzes the endings of the sensory nerves.

Any further action upon the eye than anæsthesia is not possessed by holocain. It has no influence upon the width of the pupil nor upon the mechanism of accommodation. It does not constrict the vessels.

In regard to further local effects produced by holocain there should be emphasized the action upon striated muscular fiber. A gastrocnemius of a frog placed in one per cent. holocain solution undergoes gradual contraction whereby it becomes thickened and shortened; simultaneously its excitability to mechanical and electrical stimuli decreases more and more. The muscle loses its shining, translucent appearance, until it finally exhibits cadaveric rigidity and complete insensibility. If the heart is placed

in one per cent. holocain solution it becomes after a time rigid and unexcitable.

For low forms of animal life holocain is seen to be a protoplasmic poison. If a drop of water containing numerous paramacia is combined with an equal drop of two per cent. holocain solution, which also contains 1.2 per cent. sodium chlorid—so that we have really a solution of holocain in physiological salt solution—the movements of the infusoria soon begin to diminish in rapidity; after an interval we see only rotary movements by single individuals, there being no longer any advance in a straight line. Simultaneously we see the normal ovoid shape become spherical; the protoplasm becomes cloudy and the paramecium is immovable, dead.

Holocain has an energetically inhibitory effect upon the growth of bacteria, while a one per cent. solution distinctly retards putrefaction and fermentation. A one-half per cent. solution prevents any development of spore-formation. Growing schizomycetes are destroyed by a one per cent solution. Holocain is, therefore, seen to be a strong antiseptic. When an ordinary medicine bottle is filled with hot holocain solution we often see form, after the expiration of a few seconds, a more or less marked cloudiness or precipitate. If this is studied microscopically we can see nothing but amorphous masses—no bacteria or fungi. The cause of this turbidity is as follows: Ordinary glass bottles give off small quantities of alkali in the presence of boiling water, and this sets free a corresponding amount of base which precipitates in an amorphous form. If we would avoid this cloudiness we should either employ porcelain containers or boil all glass vessels thoroughly in distilled water. Otherwise, the cloudiness is unimportant; through the precipitation of base by dissolved alkali the solution is kept neutral, while the loss of effective substance through precipitation of base is minimal. Filtration renders the solution once more applicable. There is no loss of efficacy from boiling. Moreover, boiling is not necessary for the purpose of sterilization, because a holocain solution is in itself bactericidal.

Holocain possesses an intense resorptive action. Through this property it shows itself to be an intense convulsive poison resembling strychnia. If 0.002 to 0.003 gram of holocain are subcutaneously injected into the frog, the reflex excitability is increased, without the production of convulsions. In cold-blooded animals holocain, in addition to its exciting action upon the nerve centers, inhibits a curara-like action upon the motor-nerve endings. The increase in reflex excitability becomes especially distinct if we ligate the afferent vessels of one limb, which is not reached by the poison, while the effect on the opposite limb is masked by the paralysis of the motor periphery. Strychnin is known to exert a similar curara-like action when given in large doses. In warm-blooded animals the peripheric action of holocain is not seen, so that its convulsive action is alone exerted.

The toxic dose for a mouse is 0.001 gram; for a medium-sized rabbit (weighing 1500 to 2000 grams) from 0.01 to 0.015 gram. In about six to eight minutes after subcutaneous injection the convulsions begin in rabbits with trismus and movements of the ears; there soon follow clonic-tonic convulsions of the nuchal muscles, and finally the entire musculature is involved. Attacks of opisthotonos are repeated, apparently spontaneously, while reflex convulsions may be readily induced. The animals are not rarely thrown into the air by the convulsions. In the intervals between the latter they remain weak and powerless, breathing laboriously, lying on one side. Death follows either from asphyxia due to interference with respiration, in the midst of a convulsive attack (under these circumstances artificial respiration may sometimes save the animal's life), or the animal succumbs to a high degree of exhaustion through paralysis of the vasomotor and respiratory centers. The convulsions originate in the brain, not in the cord. Mice in which the dorsal cord has been divided with the thermo-cautery exhibited convulsions of the anterior portion of the body alone.

Comparative tests of holocain with cocain and eucain

give the following minimal anæsthetizing doses for the rabbit: Holocain, 0.2 per cent.; cocain, 0.2 per cent.; and eucain, 0.5 per cent.; while the lowest toxic doses of the same drugs (for rabbit weighing 1500 grams) are of holocain, 0.01 gram; cocain, 0.05 gram; and eucain, 0.075 gram.

Experiments carried out for four months in regard to the applicability of holocain in ophthalmology give the following results:

In regard to the dosage of the remedy, the application of a five-tenths to eight-tenths per cent. solution will suffice in most cases—at least after repeated instillation—for the production of complete anæsthesia. Only in individual cases in especially refractory patients is a strength of 1 per cent. required—this invariably producing the desired result. On this account it is recommended that one per cent. solution be applied in routine practice, and one or two drops of this strength instilled into the eye will produce complete anæsthesia in from forty to fifty seconds at the least. If after forty seconds have elapsed one or two more drops of the same solution are instilled, another interval of thirty seconds will find the cornea completely analgesic; so that, all told, one and a half minutes should suffice in any case to produce complete corneal anæsthesia.

The remedy causes in most cases a moderate degree of burning, which appears immediately after instillation, and which ceases after an interval of thirty or forty seconds; after the cessation of this sensation and reopening of the lids the analgesia and anæsthesia begin. Simultaneously with the burning a slight redness develops, especially noticeable in the bulbar conjunctiva, which vanishes again after the expiration of one or two minutes, otherwise the condition of the eye, both during and after anæsthesia, remains normal. With five-tenths per cent. solution the anæsthesia persists for from five to eight minutes, while in one per cent. strength loss of sensation lasts at least ten minutes. The disappearance of the anæsthesia is gradual,

and it often happens that the cornea is partly analgesic five minutes after its sensibility has returned. No other phenomena are caused by the application of holocain.

By reason of the pharmacologically demonstrated toxicity of this substance, it was applied at the outset only when the capsule of the bulb was intact. The experiment was then made of injecting a one per cent. solution colored by methylene blue into the anterior chamber of a rabbit's eye, using an ordinary hypodermic syringe. As this experiment gave rise to no phenomena of irritation worth mentioning, and no inflammatory reaction, a one per cent. solution was thereupon used in operations upon the eye involving the opening of the capsule. Hereupon it became apparent that when holocain was instilled into the anterior chamber it acted as promptly upon the iris—and probably the ciliary body—as upon the cornea; at least no pain was experienced by a patient during the operation of iridectomy in a case of florid iritis. Similarly no harm resulted in cases of perforating injuries of the bulb. Holocain is, therefore, well applicable in operations upon the eye. Subconjunctival injections with holocain were not attempted.

In comparing the action of holocain with the well-known anæsthetic properties of cocain, it appears that both drugs cause irregularities upon the surface of the cornea in rabbits, although this phenomenon is not seen in mankind. Doubtless it might occur in the latter if winking was suppressed for a long time, *i. e.*, if the irregularities are conceived—as in rabbits—as a result of evaporation of the eye and drying of its most superficial layers. Cocain anæsthesia, as is well known, is continued by two factors, viz., direct action upon the nerve-endings and anæmia from vascular constriction. Holocain works only upon the nerve-endings, not at all on the vessels. Through this fact and also through the rapid supervention of anæsthesia, the danger of injury to the cornea is a very remote one in the case of holocain, while cocain has often caused permanent corneal opacities. The appearance of a dearth of lymph

in the cornea in insufficient nourishment of the latter is excluded in the case of holocain, as are also dilatation of the pupil, narrowing of the range of accommodation, and diminution of intra-ocular tension, all of which phenomena are dependent upon the fact that cocain acts upon the vessels while holocain does not. It therefore appears that the holocain possesses the following advantages over cocain :

I. In its antiseptic quality, which renders sterilization of the solution unnecessary.

II. In its rapid action, with the thereby diminished danger of injury to the cornea, and the ready utility of its application before the employment of painful medicaments.

III. Its freedom from any deleterious after-effects.

Holocain is, therefore, to be highly recommended in ophthalmological practice, and, according to experiments thus far conducted, the best method for using the drug is to instill one to two drops of one per cent. solution just before operation, to be followed half a minute later with a repetition of the same number of drops ; then after one or one and one-half minutes the eye is ready for operation.

A peculiar phenomenon in connection with the application of holocain should now be mentioned briefly, viz., the formation of a glassy, irregularly thick film over the cornea, without participation of the conjunctiva, which I saw two months ago in two anæmic patients with conjunctivitis sicca. This coating could readily be detached with the forceps, and the subjacent cornea was found intact. Since then I have never witnessed this phenomenon despite the fact that I frequently employ holocain.

SOCIETIES.

Abstracts, with discussions, of the more interesting papers presented at recent meetings.

AMERICAN INSTITUTE OF HOMŒOPATHY ; SECTION IN OPHTHALMOLOGY, OTOTOLOGY, AND LARYNGOLOGY, JUNE. (Continued.)

Malignant Diseases of the Nasal Accessory Cavities,* by Geo. B. Rice, Boston.

(Discussing A. W. Palmer's "Extra-Nasal Diseases of the Nose." †)

We all recognize the fact that malignant growths occasionally originate in these accessory cavities, and we include the nasopharynx in this category. These growths also vary greatly in degree of malignancy, according to the type of the cell formation and the exact location from which they originate.

Pathologists will tell you that it is often very difficult to distinguish certain lymphoid growths originating in the nasopharynx, particularly tuberculous degenerations, from certain sarcomatous tumors, and these facts should make us very guarded in our diagnosis and prognosis. In some of the other cavities where the blood supply is greater, where the lymphatics are more quickly affected, and where there is greater tendency toward the involvement of adjacent structures, such as the ethmoidal cells, malignant tumors form rapidly, the symptoms of pain, swelling, and constitutional disturbance are more marked, and therefore the diagnosis need not be so difficult.

I have one case in mind of an angio-sarcoma originating in the basilar process of the occipital bone, and so filling the nasopharyngeal space as to interfere with nasal respiration and middle ear air interchange. This growth was very slow in its

* See p. 282, July, this JOURNAL.

† P. 274, this JOURNAL, July.

formation, extending over a period of nearly five years. It had recurred after removal by surgical means five different times, but is now practically eradicated, by means of injections, first, with a preparation of creosote twenty per cent. in vasogen, and, finally, by injections of a derivative of creosote known as Alexandria's solution.

Another case originating in the ethmoidal cells and showing similar microscopical appearances has grown with great rapidity, in spite of surgical operations and injections, to such an extent as to bring the patient near death's door after a period of only six months from the beginning of the growth.

It seems to me that surgical methods in the treatment of these tumors are bound to be disappointing because of the impossibility of removing all diseased tissue. To my mind, our only hope of curing such growths lies in the use of some constitutional remedy and in the injection of medicaments into the tumor.

NEW YORK STATE HOMŒOPATHIC MEDICAL SOCIETY.—OPHTHALMOLOGY, OTOTOLOGY, AND LARYNGOLOGY.—BUFFALO, SEPTEMBER 24 AND 25, 1901.

F. PARK LEWIS read *A Preliminary Note on that Form of Toxic Amblyopia Produced by Tobacco*.*

JOHN L. MOFFAT: Dr. Lewis' improvement of Skeel's perimeter strikes me as the nearest approach to perfection yet attained—except, how can I be sure my patient's eye is constantly steady if it be at the center of a hollow hemisphere in a dark room? His omission of any description of the point of fixation must be an inadvertence; of course there is such a point. As to tobacco amblyopia: in twenty years I have had a few—I do not think half a dozen—cases in patients who denied alcohol; but I cannot recollect a single case attributable to alcohol without tobacco. An apparently healthy man, over seventy years old, stopped tobacco entirely upon my direction on account of amblyopia. He had smoked and chewed since boyhood. He stood the change fairly well, but in about three weeks suddenly died of heart failure. In my experience patients will not give up tobacco gradually; they must do so at once or we will fail to check their amblyopia.

* See p. 399, this number of the JOURNAL.

There is great force in Dr. Lewis' suggestion,—which I endorse,—that every case of toxic amblyopia should have a thorough examination as to elimination (urea, sulphates, phosphates, chlorides, peptonuria, etc.), and the condition of the liver, bowels, etc. Query: Is not the exclusivist more apt to neglect this than the specialist?

H. D. SCHENCK: Nicotin, according to the London *Lancet*, is comparatively harmless; pyridin is the basis of tobacco poisoning.

DR. LEWIS: The value of a dilated pupil without the use of a cyclopegic will be immediately evident. In the bright daylight, contracting the pupil, the less sensitive and therefore most important, peripheric portions of the retina from a diagnostic point of view, are shut out of the test. On the other hand, the extramacular parts are more sensitive to a small point of light in a region otherwise dark than is the visual center. Hence a star which is invisible in the visual axis becomes apparent when the eye is turned slightly to one side.

In accurate tests the size of the point of light is of great importance. If it be too large, small scotomata may be missed in a general exploration of the field, and important data overlooked.

DR. MOFFAT'S paper, *Some Remedies for Otorrhœa**, was read but elicited no discussion.

Tuberculosis of the Upper Air Tract, by J. H. Hallock.†

Discussion.

FRED. D. LEWIS: I take exception to the writer's statement that consumption is not an inherited disease. True, the congenital constitutional condition of the system which renders the children of tubercular mothers more susceptible to the disease is the rule. But, although I cannot now quote my authority, I remember distinctly reading the account of a number of autopsies made on prematurely born infants of consumptive mothers. In the lungs of one at least, and, if my memory serves me rightly, in two or three, well-developed tubercular infection was present. That, however, has nothing to do with this paper, as this deals with the upper air passages, and not the lungs. As the doctor

* See p. 404 of this number of the JOURNAL.

† See p. 409 of this number of the JOURNAL.

truly says, the disease in the larynx is usually an extension upward from a primary lung infection ; but this is not always so. One case, which I saw first on May 5, 1900, presented a perfect laryngoscopic picture of tubercular laryngitis, but a thorough general physical examination by one of the leading physicians here revealed only a reduced percentage of hæmoglobin from the normal. She improved greatly under indicated remedies—mostly calc. carb., calc. phos., and calc. iod. Toward fall I advised her to spend a month in the Adirondack Mountains. There she contracted typhoid fever, which nearly proved fatal. She returned home to regain her strength, which came back as rapidly as could be expected. I believe, though, that her throat trouble was cured before she had the fever, as there has been no further trouble there. She has gained in weight and is perfectly well to-day. Most cases are seen so late, however, that their death warrant may be read in the laryngeal mirror.

As the writer also says, the picture in the mirror is so characteristic that one who is at all accustomed to the use of the laryngoscope should have no trouble in making a diagnosis at a very early stage. I do not wish to encroach on the subject of the paper which is to follow, on the treatment, but I cannot let the opportunity pass of mentioning the great help, in the relief of pain and swallowing, that I have had from the use of orthoform. This powder, blown into the larynx with a powder blower two or three times daily, will insure comfort at least, in the most advanced and desperate cases, to the end.

C. E. LANE : I have found sloughing under the continued use of orthoform following the opening of small abscesses. Upon stopping it the surfaces healed partially, but sloughing recurred upon resuming orthoform.

H. W. HOYT : In many cases it is not easy to diagnose tuberculosis of the larynx from syphilis or cancer, when there is no recognizable infected area in the lung. In such a case the safest thing to do at first is to put the patient on syphilitic treatment. If it doesn't clear up then, you have eliminated one factor. There are some cases of tuberculosis of the larynx where you do not find the anæmia of the mucous membrane about the fauces and pharynx, which is the characteristic of tuberculosis ; and

then, if we can eliminate syphilis we are brought to face one or two very serious conditions. Climatic and soothing treatment, emulsion, orthoform, etc., promise the best results. Curetting and applications of lactic acid are rather barbarous, and are being abandoned to-day by a great many who used to use them extensively. I have never seen any trouble with orthoform, and have used it a great deal ; it does give an immense amount of comfort, to say the least, in laryngeal cases.

AMERICAN MEDICAL ASSOCIATION, 1901.—OPHTHALMOLOGY—
(CONTINUED).

Empyema of Frontal Sinus.

E. FLETCHER INGALLS, Chicago, advocated protargol one per cent. to three per cent. solutions, as wash even in chronic cases. In radical external operation it may secure better cleanliness in certain cases to open both ends of sinus. Photographs of various abnormal conditions of sinus, as to size and position and number, were shown.

Carcinoma of the Naso-Pharynx, Chevalier Jackson, Pittsburg.

This was a résumé of published cases and a report of a private case, from which he concluded that fetor was absent in seventy-one per cent. of the cases ; hæmorrhage was not a constant symptom ; glandular involvement in ninety-three per cent. of cases, and cerebral extension in fifty per cent. Prognosis ultimately poor ; duration usually from two to six years. Treatment should be palliative.

Queries : Why is carcinoma of the naso-pharynx relatively so rare ? Has it any bearing on irritation ? Is radical operation justifiable ? If so, in early stages when is it not ? What can be done to promote euthanasia ?

Sarcoma of the Nasal Passages, with Report of a Case, by Dunbar Roy, Atlanta.

The history of this case would support the theory that benign growths, as myxomata, can by irritation be transformed into malignant. In this case, which proved fatal, the erysipelas toxins were tried without result. A temporary reduction in size and relief of discomfort was secured by ligation of both external carotids, thus shutting off blood supply.

A Case of Epithelioma of the Upper Respiratory Tract, by S. A. Oren, Lanark, Ill.

Case pronounced epithelioma by consultation and microscopic examination of section. Very radical operation proposed and refused. Finally cured by energetic local measures, consisting of antiseptic powder blown in with force; chemically pure nitric acid; curette; injection of absolute alcohol at periphery, to prevent spread of disease. Treated three times a day.

Diagnosis and Treatment of Mastoiditis, E. B. Dench, New York.

For cleansing the middle ear after rupture or perforation of the m. t., irrigation with bichloride 1:5000 was advocated, while the author opposed the use of peroxid of hydrogen on account of expansion driving pus into antrum, and debris remaining. Position of patient makes no difference in regard to mastoid infection—it becomes involved as easily from one position as another. Cold applications to mastoid do not abort cases that would not have yielded to other means; they only mask symptoms. Pus in antrum is never absorbed, but serum may be. Facial paralysis is no special indication of mastoiditis. Tenderness over tip of process in a mastoid case means perforation at that point. Wildes' incision is useless in mastoid cases operating. In enlarge the aditus ad antrum by sharp spoon. Hæmorrhage from lateral sinus is not troublesome; control it with finger, and then clean out clot and pack with gauze. Tampon that portion of incision from the rest of operation field by gauze. Streptococcus infection is the most frequent cause of mastoiditis.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY; SEVENTH ANNUAL MEETING, NEW YORK, 1901.

A Case of Corrected External and Internal Deformity of the Nose.

T. Passmore Berens, New York, presented a young man with a history of an injury to the nose in early childhood. The bridge of the nose was much elevated and deflected to the left, forming a large disfiguring hump. The septum was deflected to the left, and adherent, causing almost complete occlusion of the nares. The nasal bones and part of the cartilages were laid bare, and the bony hump divided with a chisel. The parts were closed, and the wound dressed. The operation was

in part a cutting and in part a crushing, operation, and had been done on March 5, 1901. Healing had been rapid.

OTTO J. STEIN of Chicago said he understood a forceps had been used to break loose the nasal bones from their attachment to the frontal and superior maxilla. He had himself done this operation several times, and on the last two occasions had experienced great difficulty in breaking the bones loose from the superior maxilla. The condition brought about by the blows had been so severe that it did not seem to him that a repetition was warranted.

Thrombus of the Lateral Sinus, Thomas J. Harris of New York.

A man, about twenty-three years of age, had been admitted to the hospital April 3, with a history of pain and otorrhœa for about one week and a swelling in the neck. There was no elevation of temperature at the time, and he complained only of frontal headache. A few days later an exploratory incision was thought to be necessary, and accordingly the mastoid cells had been opened, but nothing had been found. A long clot was removed from the sinus. From that time to April 17 he had done well, but on a return of the symptoms the incision had been extended to the clavicle and the jugular vein opened, no clot being found until the facial vein had been reached. The man had been very ill for several days afterward, and had had a metastatic pneumonia. At no time had there been any tenderness over the mastoid, and no pus had been found in this region. The pain complained of had been almost wholly over the frontal lobe of the brain. The symptomatology of this case had been quite obscure.

M. D. LEDERMAN of New York said that one must not expect to find the classical symptoms either in sinus or mastoid disease. In one of his own cases there had been a running ear for ten weeks, but none of the classical symptoms of mastoiditis. The usual mastoid operation had been done, and no disease of the sinus found; paracentesis had resulted in the withdrawal of blood. In his opinion such a procedure was not sufficient; it was better to make a bacteriological examination in addition. After a week or two in this case the sinus had been exposed and jugular thrombosis found. The vessel had been ligated near the clavicle and opened, but no blood found. Owing to the very

bad condition of the patient, the complete operation had not been done. The patient had ultimately died. In another case there had been acute involvement of the mastoid, in a woman who had had one child. The sinus was curetted to within one inch and a half of the torcula, and jugular exposed. It was tied close to the clavicle and opened, and a turbid fluid was found. About ten days afterward there had been an elevation of temperature and a swelling of the neck. On cutting down upon this no pus was found, but an inflammation of the veins existed. Under a wet dressing the patient made a good recovery.

WALTER B. JOHNSON of Paterson, N. J., had had a similar case to the one presented by Dr. Harris. The patient had been sent home on account of homesickness, and had temporarily improved. When the true nature of the case had been discovered, operation on the jugular was advised, but declined, and the patient died.

DR. HARRIS said that it should always be remembered that it was not necessary for the patient to have a decided chill before one feels justified in making a diagnosis of involvement of the sinus. In the case under discussion there had been no chill, but there had twice been chilly sensations. With high temperature and chilly sensations one is warranted in making an exploration.

The Nature of Cancer, Henry L. Wagner of San Francisco.

Dr. Wagner presented drawings illustrative of the work done by an investigator in his city on the nature of cancer. About two months ago this gentleman, Dr. Eisen, had become infected with cancer, and was now practically in a dying condition. His important and interesting research had been completed about two years ago. He had studied the development of the spores in his own case. Upward of seventy cases of carcinoma had been investigated in this way, and the results would be eventually published in detail in book form.

Traumatic Dislocation of the Left Arytenoid Cartilage, H. L. Wagner.

He said that such dislocation was very rare: he had only been able to find one such case on record. His patient was an old man, about seventy years old, who had been struck in the throat by

the fist of a drunken soldier. The patient complained of great pain on deglutition, but there was no bloody expectoration. Under an alkaline spray and an ice compress the swelling rapidly diminished, and an examination then revealed dislocation of the left arytenoid cartilage with fixation between respiration and phonation alone. There was no fracture of the cartilages.

A Congenital Deformity of Both Auricles, Dr. Wagner.

Dr. Wagner also presented a photograph of this condition in a boy of five. There was an absence of the inner part of the upper helix and great overdevelopment of the anhelix. The deformity was the result of an arrest of development occurring during the second and third months of intra-uterine life.

W. FREUDENTHAL of New York said that he had seen several cases in which he had suspected fracture of the cartilages, and in them crepitation had been elicited, but in these persons as well as in others this crepitation was normal.

DR. WAGNER said that in his case there had been crepitation at first, but it had very quickly disappeared, whereas in cases of infraction or fracture that he had observed this crepitation had existed much longer. He was of the opinion that when the arytenoid cartilage was slightly separated from the cricoid joint there would be crepitation.

Disease of the Upper Air Passages in Relation to the Mental Development, L. F. Page, Indianapolis.

The intimate relation between the blood spaces of the mucous membrane and the subarachnoid space have been thoroughly demonstrated, and an equally intimate relation exists between certain venous regions of the nose and the interior of the skull. The capacity of the lymphatics of this region for absorbing toxins was often observed in diphtheria, and impure blood was one of the causes of interference with mental development. Engorgement of the erectile tissues and the irregularities of the nasal cavities often interfere with drainage, and so give rise to contamination of the blood. A study of the anatomy of the nasal fossæ showed plainly that this region should be a fertile source of reflex disturbance, and it was not difficult to imagine that such irritation might exert an important influence on the psychological function of the brain. A bony spicule or an en-

larged turbinate, by constant pressure and irritation, may cause exhaustion of its special center, and gradually and secondarily affect the whole nervous system. Constant overstimulation means exhaustion sooner or later. The author has been often impressed by the mental defects exhibited by children with adenoids and enlarged tonsils, and the mental improvement following their removal.

PRICE BROWN of Toronto thinks the effect of adenoids or other hypertrophic lesions in retarding mental development is very evident, and the fact should be noted and emphasized. Two children had been recently brought to him with the statement that while they had been bright and intelligent in infancy, they were becoming more and more dull and stupid. Examination showed the post-pharynx obstructed by adenoids, and the younger child had never breathed through his nose. These facts should actuate the physician to inform the parents of dull children regarding the reasons for such lack of mental development.

GEORGE T. RICHARDS of Fall River, Mass., recently saw a boy who had become so dull that he refused to go to school any longer, because he realized how backward he was. On restoring nasal respiration the child's mental condition rapidly improved.

E. E. HOLT of Portland, Me., thought this showed the necessity for having a school physician, not in general practice, who should be unusually well qualified and broadly educated. He thought every member should use his influence towards securing proper medical supervision at school, as the records which would accumulate as a result of such a system would prove most valuable from a sociological point of view.

SARGENT F. SNOW of Syracuse said that the general practitioner should be impressed with the fact that not only did adenoids exert a bad influence on the general development, but that good ventilation of the olfactory region must be secured. Mention was made of a boy who was becoming dull mentally, yet examination showed only occlusion of the middle and superior air passages. General medical treatment and simple local applications had speedily changed the whole complexion of the case. He had a case of epilepsy which was undoubtedly due to intranasal pressure.

FRED. G. COBB of Boston thought it was most important for the specialist to ascertain just what pathological states give rise to reflex disorders, and what cases of this kind can be cured.

JAMES F. MCCAW of Watertown, N. Y., cited a case in which he questioned if the apparent mental deficiency were not due to deafness. He was of the opinion that the mental deficiency found in children with adenoids was often not directly the result of the adenoids, but of the associated impairment of hearing.

L. A. COFFIN of New York also thought the dullness was often apparent rather than real. There was frequently a loss of self-confidence, which was restored by operation. The main factor seemed to be a lack of perception. The child with the stuffed-up nose was engrossed with himself, and could not give attention to his teacher without the exercise of more self-control than he could exert.

FRED. T. ROGERS, of Providence, R. I., said that for some years it had been the custom in Providence to place the backward children of the city in special schools. At one time he had examined the children in one school, and about seventy per cent. of them had been found to be suffering from obstruction of respiration or from some high error of refraction. He personally knew of certain of these children who had been taken out of these special schools and returned to the ordinary schools because of the mental improvement resulting from treatment directed to these defects.

ALVA B. ABRAMS of Hartford, Conn., said that he found patients and physicians seemed to derive much comfort from the statement unfortunately often found in the text-books, that adenoids and similar growths shrink up and give rise to less trouble in later life. While, of course, this was the result exceptionally, it would be better if physicians would forget that this happy termination ever occurs.

DR. PAGE, in closing, said that he had met with several cases in which children who had been late in talking had very soon acquired the power of speech after an operation for the removal of adenoids, and from this he inferred that the presence of adenoids sometimes interferes with the development of the speech center.

Tubercular and Syphilitic Granulomata of the Nose, William Lincoln of Cleveland.

Dr. Lincoln reported two cases of granulomata of the nose presenting similar appearances, though one was tuberculous and the other syphilitic in nature. The first case was that of a woman of forty-six, who had contracted syphilis five years previously. Six months before coming under observation obstruction of the right nostril had begun. Examination showed a rounded, non-pedunculated tumor springing from the surrounding healthy mucosa. It bled easily and was not tender. On the hard palate were several characteristic syphilitic ulcers. Microscopical examination showed typical tubercular tissue with giant cells. Physical examination of the chest was negative. The patient was put on iodide in increasing doses. Within three weeks the ulcers had healed, and the tumor had markedly diminished. A month later the granuloma had completely disappeared. The second case was that of a woman, forty-five years of age, who had lost flesh and had night sweats. For some months she had been troubled by nasal obstruction. Examination showed a pale red sessile mass on the cartilaginous septum without ulceration. There was no history of syphilis. Microscopical examination showed the ordinary structure of tubercular granuloma with giant cells, but no tubercle bacilli could be found. A course of treatment with mercury and iodide had no effect, and accordingly the growth was curetted. About eight months later the patient returned with a similar condition in the other nostril, and in a similar site. The patient then gave evidence of tuberculosis of the lungs. It was possible to construe this case as one of primary tuberculosis of the nose. An interesting deduction was that the diagnosis could be made better by the consideration of the results of physical examination and treatment than by dependence upon the histological examination. The treatment of tubercular granulomata should be by thorough curettage.

Some Observations upon the Diagnosis and Treatment of Specific Diseases of the Naso-Pharynx, P. S. Donellan of Philadelphia.

Dr. Donellan had recently seen a case of chancre on the posterior arch of the palate, the diagnosis being evident from the appearance, and being confirmed by the subsequent course of

the disease. There was nothing in the history to point to the manner in which infection had taken place. Ulcerations of the pharynx were common, and were associated with painful deglutition and obstruction of respiration, and the usual symptoms of "catarrh," the diagnosis usually made by the general practitioner after a superficial examination. He had been impressed with the importance of making a routine thorough examination of the naso-pharynx with the aid of White's palate retractor. A bacteriological examination of the secretions of the lesion and antisyphilitic treatment would usually enable one to make the differential diagnosis between tuberculosis, syphilis, and diphtheria in obscure cases. Local and systemic antisyphilitic treatment were called for in syphilitic disease of the naso-pharynx. He was personally in favor of the hypodermic method, using bichloride of mercury in doses of one-sixteenth to one-fourth of a grain. The injections are usually given deeply into the muscles of the lumbar region. He gave the mercurial as long as the disease showed activity, and then interruptedly for two years. The alkaline douche and black wash should be used locally. Where there was much dysphagia, orthoform sometimes proved useful.

GEORGE L. RICHARDS of Fall River advised that a thorough trial of antisyphilitic treatment should be given in cases in which a diagnosis of syphilis has been made, before resorting to any surgical interference, for the chances were that such interference would then be found unnecessary.

L. A. COFFIN of New York referred briefly to two desperate cases of syphilis in the pharynx.

CHARLES F. MCCAHAN of Aiken, S. C., said that in his experience most of the cases of tuberculosis of the throat are secondary, and he believed that the same was true of tuberculosis of the nose.

PRICE BROWN of Toronto said that a gentleman had been referred to him by an oculist some six months ago for nasal treatment, with the statement that the man had specific keratitis and had been receiving antisyphilitic treatment. Examination of the nose showed that the trouble there was traumatic, not syphilitic. He subsequently returned with a perforation of the soft palate, evidently the result of the formation and breaking

down of a gumma. The history showed that he had become syphilitic ten years before, but after having been treated for a time had married. Both children were healthy, and the wife is said to be healthy. Under antisyphilitic treatment the condition of the palate had been kept in check.

An Operation for Prominence of the Auricle, Thomas R. Pooley of New York.

An actress, aged twenty-eight, had both ears operated on at an interval of a few days, following closely the method of Dr. Edward T. Ely. An incision was made through the skin along the entire length of the furrow formed by the junction of the auricle with the side of the head. This was joined at each end by a curved incision, and the skin dissected off. An elliptical piece of the cartilage, one-eighth by one-third of an inch, was removed. The wound was united by seven interrupted sutures of black silk, four passing through the skin only, and the other three through both skin and cartilage. The operation was done under local cocain anæsthesia and strict asepsis. The wound behind the ear healed by first intention, and that in front by granulation. The first operation had been done on August 6, 1900, and the patient was well satisfied with the result and with the method of operating.

M. D. LEDERMAN of New York reported a large sebaceous cyst in which, after the removal of the cyst, the auricle had been bent over on the external canal. He had accordingly made a V-shaped incision over the mastoid and removed a portion of skin; primary union had taken place. Also a case of a negro upon whom he operated for a keloid growth on the lobe of the ear.

T. PASSMORE BERENS of New York spoke of a case in which the protrusion of the ear was caused by an excess of cartilage of the concha. In that case he had excised a piece of cartilage nearly half an inch in its broadest part. The wound was closed simply by a buried suture, and was dressed with collodion, binding the auricle to the side of the head with a gauze bandage. At the end of the fifth day the wound had healed, but the bandage was worn for eight days longer, and by that time the ends of the cartilage had united. The operation had been done two months ago, and at the present time the extra fold of skin left

after the operation had nearly disappeared. He was opposed to making an anterior as well as a posterior incision.

J. F. MCKERNON of New York had seen a very similar operation done ten years ago by Dr. George Abbott of this city, except that three sections of the cartilage had been taken out without affecting the skin anteriorly at all. The result had been very good. Within the last three years he had seen another case also yielding a good result.

DR. POOLEY said that he felt sure that any operation which did not involve a considerable dissection of the cartilage would not succeed, but whether one should go through the entire concha or not was a question.

Empyema of the Frontal Sinus: Some Observations on its Treatment, George L. Richards of Fall River.

Dr. Richards called attention to the fact that the frontal sinus varied in position, size, and thickness. The danger to life of empyema of this sinus he considered to be very small. If exploratory puncture of the antrum were negative, then the source of the pus might be the anterior ethmoidal cells. Transillumination was of some value. As a rule, the entire anterior portion of the middle turbinate would have to be removed as a preliminary measure to treatment. These cases tend to get well if the drainage were thorough enough. The direction of the canal having been determined by means of a probe, a silver or hard rubber tube, curved like the probe, should be passed in, and the sinus washed out. Where the purulent discharge had lasted a long time and polypi had formed, it was more difficult to decide upon the best method of treatment. The anterior ethmoidal cells should be thoroughly destroyed with the curette. He had the best results from irrigation when he had used a solution of corrosive sublimate, 1:10,000. The question of operation must depend upon the presence of evidence of septic absorption, of symptoms of cerebral irritation, or the recurrence of attacks of pain. He preferred to make the opening between the supra-orbital notch and the root of the nose, and underneath the ridge, and preferred the mallet, chisel, and curette to the surgical drill. The opening should be made as large as possible, and all of the ramifications of the sinus vigorously curetted. The best form of drainage was by the fenestrated rubber tube.

The tube should be retained at least two or three weeks. It was best to keep the external wound open for a time.

NEIL J. HEPBURN of New York said that in Dr. Halsted's case the blindness might have resulted from a thrombosis of the central retinal vein. Unless the pressure had occurred very suddenly it could hardly account for the very sudden onset of the optic neuritis of that grade. An ordinary optic neuritis coming on from pressure would disclose a certain progressive loss of vision. He had witnessed one case of operation on the sphenoidal abscess by an eminent surgeon, in which the cavernous sinus had been accidentally opened. The hæmorrhage had been most startling, but the surgeon had retained his composure, and had succeeded in controlling the bleeding by packing in a way which has led the eye-witnesses to have less dread in the future of the occurrence of such an accident.

TALBOT R. CHAMBERS said that many cases of frontal sinusitis, if taken in hand early, might be aborted before the occurrence of the purulent stage. The accumulation of mucus in a frontal sinus was the first step of a sinusitis, and could be readily evacuated. When entering the sinus and removing bone, it was better to use an instrument which could punch out an opening. A case was mentioned in which at one sitting he had taken away the inferior turbinate and the covering of the sphenoidal sinus, and opened the whole space into one cavity. By this procedure the mucous secretion could be removed in certain cases at an early stage.

SARGENT F. SNOW said that two years ago he had had a case quite similar to the one reported by Dr. Halsted. The difference was that the blindness had been a week in coming on. There had been so much pressure that the vitality of the bone had been lowered, and the operation had been done for the most part with a Buck's ear curette slightly bent near the ring, a very safe instrument for such work.

REDMOND W. PAYNE of San Francisco said that Dr. Richard's paper and exhibition of skulls called to mind some of his own work. He had endeavored to determine the number of anomalies met in this region. In the formation of the sinus itself was to be found the reason for many failures. In some of the sinuses that he had examined the depth of the sinus had

run back over the orbit almost to the optic foramen, both plates being exceedingly thin. In some instances in which the sinus had run back deeply it had been divided into several compartments by bony septa. Such cases showed at once the impossibility of eradicating the disease by any opening below without an attempt to reach it with the curette. The external wall should be removed, either entire or in section, thus exposing the seat of the disease, and permitting thorough exploration. If the mucous membrane lining the sinus had undergone fungous or polypoid degeneration, and two-thirds of it only had been removed, the patient would not be permanently cured. Many of these cases of chronic suppuration would go on for years. Not many cases of meningitis had been reported in this connection, but as there were many cases of meningitis following chronic suppuration of the ear he saw no reason why the same should not occur in cases of sinus disease.

CHARLES W. RICHARDSON of Washington spoke concerning operative intervention in cases of purulent discharge from these sinuses. When pus issues from a closed cavity the proper course is to insist upon opening the sinus and removing the diseased condition found there. It seemed to him that conservatism was not at all in place where there was a purulent discharge from these sinuses. In a sinus so accessible as the frontal there should be no question as to the wisdom of operative intervention. A very slight purulent discharge might be connected with very extensive disease. In other regions of the body in which operative intervention is much more dangerous, the general surgeon does not hesitate, and he could not see why the rhinologists should be so backward about operating. No one hesitates about opening an abscess of the mastoid. These operations should be done promptly and as thoroughly as possible.

R. C. MYLES said that free drainage is far better than anything else. He has always been opposed to over-curettling of these sinuses, for he is of the opinion that by such treatment the period of convalescence is greatly prolonged or indefinitely postponed. By such curettling the mucosa and periosteum are removed, and the re-formation of these tissues not only takes a long time, but is apt not to re-form in many crevices, and this leads to a permanent discharge. Extensive destruction of the ethmoid

cells or of bony tissue intended to protect the frontal sinus usually made the patient's condition worse than before the operation. According to his experience the best way of obtaining free drainage is by removing the anterior end of the middle turbinate, and also the median wall of the anterior ethmoidal cells. This alone, with proper irrigation, will effect a permanent cure in the majority of these cases. It is his practice to remove the anterior wall of the sphenoidal cells rather thoroughly, never curetting the upper wall. In a few months the opening would close by contraction of the mucous membrane, but it could be quickly and almost painlessly opened with a bistoury. In the unfavorable frontal cases the great obstacle was the nasal process of the superior maxillary bone. Entrance above the orbit was the straightest way for removing this process. This could be done well only by making the opening above the supraorbital ridge. He formerly did the infraorbital operation, and had experienced great difficulty in getting rid of this hard, bony process. In his opinion, all cases of acute empyema of these cells should be carefully studied before attempting operations. In chronic cases conservatism should be given a trial. Frequently irrigation would be sufficient, or the mere extraction of a tooth, and it should be tried first, care being taken to explain to the patient that it was in the nature of the preliminary operation.

(To be concluded.)

ABSTRACTS FROM CURRENT LITERATURE.

Operating on the Apparently Unaffected, or at Most but Slightly Involved, Eye in Glaucoma.—G. E. de Schweinitz.—*Phila. Med. Jour.*, September 21, 1901.

A classical paper, worthy of careful study, in which Dr. de Schweinitz gives apparently sound grounds for some operation—he prefers iridectomy—*before the root of the iris is welded to the cornea.*

Immunity for five years does not confer complete immunity, and it is impossible to state that any specified interval insures to

the second eye entire freedom from risk. Ten-, and even twenty-, year intervals have been reported.

Von Graefe noted that in thirty per cent. of his cases glaucoma broke out in one eye within a fortnight of an iridectomy upon the other for primary acute glaucoma performed during the period of high-grade inflammation, especially if it previously had shown prodromata of glaucoma.

If the tests are positive, "an iridectomy (some surgeons would prefer sclerotomy) should be performed upon this eye as soon as the anterior chamber is restored upon the opposite side; that is to say, as soon as the wound has closed; in the meantime the eye should be kept under the influence of a myotic."

An eserine existence is not a safe one. Even the most intelligent patients cannot be trusted to report at suitable times and in season.

Authority for preventive iridectomy is hard to find in modern text-books.

Scotomata are often the forerunners of subsequent defects in the periphery of the field of vision, and should be carefully searched for—it is not safe to rely only upon the periphery. The visual field may be contracted for one examiner and uncontracted for another.

When watching for increased tension, examinations (upon the sclera itself) should be made at different hours on the same day, and repeated in the evening.

J. L. M.

An Improved Lantern for Detecting Color-Blindness.—Wm. Thomson and Archibald G. Thomson.—*Phila. Med. Jour.*, September 21.

A lamp chimney with seven holes in each of the two disks, each hole is half an inch, except one of one-twelfth, which at twenty feet subtends an angle of one minute, the standard of color perception. Eldridge Green, in the London *Lancet*, is quoted as demonstrating the uncertainties of Holmgren's test-wools. The use of the lantern disposes of all doubt of the presence of color-blindness with promptness and certainty, and condemns the applicant; but the diagnosis of *green-red* blindness requires the spectroscope, aided by a number of color screens or glasses to settle any controversies or doubts. The use of

colored lights can be made by the layman to the saving of much time and needless discussion.

Queen & Co. supply the lantern, accompanied by a certificate signed by Dr. Thomson of its accuracy. J. L. M.

Resection of Superior Cervical Sympathetic Ganglion for Non-Inflammatory Glaucoma.—Joseph Mullin.—*Amer. Med.*, June 22, 1901.

He reports operating, successfully, a female, aged forty-eight, with history of bilateral iridectomy twenty-three years ago, for acute glaucoma, with gradual decrease of vision and increase of pains since that time. Pain and tension returned after three months, and at the expiration of seven, and still more so at nine, months the field was found to be smaller than before the operation. A month before the operation R.V., fingers at five feet; L.V., $\frac{5}{200}$. Nine months after operation, R.V. $\frac{15}{200}$, L.V. $\frac{20}{200}$. The excised ganglion was (macroscopically) sclerotic.

It is claimed that removal of the cervical ganglion alone is sufficient in glaucoma, because all of the sympathetic fibers go to the eye from this ganglion.

Jennesco holds that excision of the superior ganglion destroys all of the vasoconstrictor fibers of the eye, relaxing the arteries, lowering the blood-pressure and diminishing extravasation, also the nerve fibers which excite secretion, thereby modifying the volume of aqueous humor, and likewise the fibers which dilate the iris, permitting the pupil to contract, and enlarging the iris angle so the obstacle to the outflow of aqueous is removed. Destruction also occurs in the fibers which supply the unstriated muscles of Tenon's capsule, reducing pressure on the efferent veins, and thereby enhancing the normal ocular circulation.

The immediate effects of excision are relief from pain, contraction of the pupil, increased lachrymation, and sweating of the same side of the face. There is also conjunctival injection and oftentimes immediate reduction of intraocular tension. (In Dr. Mullin's case periodical formication and flushing occurred and continued several weeks.) Ptosis may occur as a remote effect, as well as a slight sinking of the eyeball and pupillary contraction. Lowered intraocular tension may be tardy. The pathological state of the ganglion is that of sclerosis, and is supposedly dependent upon pressure and inhibited nutrition.

There are two ways of performing the operation. First, reaching the ganglion by the posterior triangle, and second, by penetrating the anterior triangle. A line drawn across either triangle on a level with the fourth cervical vertebra will run almost directly across the superior ganglion. Jennesco prefers the anterior or pre-mastoid route. The posterior or mastoid is less difficult to perform and by far less dangerous. J. L. M.

Thrombosis of the Cavernous Sinus.—Double Septic Panophthalmitis.—Edward Jackson, of Denver, in the *Phila. Med. Jour.*, September 28.

He reports these two cases, with their autopsies. Their interest and value lie largely in the fact that each was at first diagnosed purulent conjunctivitis. J. L. M.

Lining the Orbit with a Large Wolff Graft, for an Artificial Eye.—Charles H. May.—*Arch. of Ophth.*, September, 1901, p. 474.

Until recently it was considered impossible to restore the socket which had become filled with cicatricial tissue in place of, or contracting, the conjunctival lining. Dr. May's patient, aged thirty, had had her shrunken right eye removed, fifteen years ago, with large masses of muscle and connective tissue adherent to it. In August, 1900, granulation tissue and shrinkage of the conjunctival sac were treated in Canada with nitrate of silver, chromic acid, electro-cautery, and division of the cicatricial bands with the knife. February, 1901, there was no space for even the smallest artificial eye, the orbit being practically filled with numerous cicatricial bands passing in various directions, the densest being horizontal. Each lid was lined for one-eighth inch with normal mucous membrane.

February 8 an artificial cavity was made with blunt-pointed scissors and the handle of a scalpel, large enough to admit the thumb-phalanx. Irrigation and mopping with three-fourths per cent. (sterilized) salt solution; packing, sterilized gauze. From outer thigh on level of groin an elliptical piece of delicate skin (free from all but the finest hairs and from large veins) measuring three by one and one-half inches was removed down to the subcutaneous fat. The leg had previously been scrubbed with soap and water, then with ether. The graft transferred to a

warm three-fourths per cent. salt solution, was cleansed from fat and connective tissue, shrinking in the process fully one-third. Around a hollow, olive-shaped porcelain support, three-fourths by one-half inch, the graft was wrapped, connective tissue surface outward, and pushed deeply into the cavity, whose bleeding had ceased; a little superfluous skin was trimmed off (allowance being made for subsequent shrinkage) and stitched with silk to the palpebral mucosa. Dressing: a thick layer of absorbent cotton wet with sterilized saline solution, gutta percha tissue, dry cotton, a binocular bandage.

As the skin on the thigh could not be undermined and approximated, the thick fat was excised and the edges of the wound held together with deep and superficial sutures—healing promptly.

About twenty hollow pieces of porcelain had been provided, almond- or olive-shaped or like the new Snellen artificial eye, so as to have one to fit and fill out the cavity.

By May 20 there was a cavity in which the patient was wearing with perfect comfort a good-sized artificial eye. Most of the graft resembles mucous membrane; at the bottom it appears like skin and has a number of hairs half an inch long. There is comparatively little discharge, which is free from odor.

As to the permanence of grafts in the orbit, Dr. May adds two cases of Thiersch grafts for symblepharon whose success was perfect at the expiration, respectively, of four years and of fifteen months. In the latter the (first) supporting shell was well tolerated, although it covered the cornea, two-thirds of which was normal.

J. L. M.

Eye Complications in Ankylostomiasis.—Howard F. Hansell.—*Amer. Med.*, September 14, 1901.

He reports a case with profound anæmia and weakness in which there were neuro-retinal œdema with a few linear, flame-like, and round retinal hæmorrhages.

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whether or not due to congestive swelling of the mucous membrane. Dunbar Roy, following Duel,—if vapors and local medication fail,—dilates rapidly with Duel's copper bougies, varying from No. 3 to No. 6 (French scale), securely mounted on No. 5 piano wire. He always starts with the smallest and increases the size after a few days' treatment. The bougies are passed through the catheters until the bulbous end is just seen at the opening. The catheter is now inserted in the mouth of the Eustachian tube. To the fore end of the wire standing from the catheter a handle is attached, communicating with the negative pole of the galvanic battery. The positive pole, an ordinary sponge electrode, is held in the patient's hand. The current is now turned on until the milliamperemeter registers 5 ma. The bougie is now passed on into the lumen of the Eustachian tube, and when it reaches the stricture he waits a few minutes for the electric action, and then by gentle pressure the stricture is usually passed and the bougie continued into the tympanic cavity. The latter is very necessary to learn by measuring beforehand how much of the free end of this wire must remain exposed, so that the other end will be in the tympanic cavity. He uses sometimes as high as 8 to 10 ma., although Duel says he never uses more than 5 ma. He always uses a pure silver catheter, and insulates it by wrapping with gutta percha sheeting. The battery he uses is an ordinary dry-cell chloride of silver battery with thirty-two cells. It is absolutely necessary to have a milliamperemeter. It takes quite a little knack and practice to use successfully these bougies, for a lack of skill will frequently do harm. One precaution necessary is to never inflate an ear immediately after the bougie, for fear of emphysema. It is remarkable, sometimes, to see how much benefited a patient will be after even one treatment. The hearing is improved, and especially is the tinnitus relieved. The electrolysis is used about twice a week, and between times the mucous membrane of the Eustachian tube and tympanic cavity is thoroughly medicated.

J. L. M.

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The reader who notes any omissions or errors will confer a favor by sending corrections to Dr. W. U. Reynolds, 320 Manhattan Ave., New York.

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 The Tonsils as Portals of Infection. A. W. Reddish. Ibid., Sept.
 Internal Remedies for Singers' Nodules. Ibid.
 Advantages of Diphtheria Antitoxin. Geo. E. Gorham, and Discussion. Ibid.
 Tuberculosis of the Upper Air Passages. J. H. Hallock. Ibid., Nov.
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BOOK REVIEWS.

ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE. By CHAS. E. DE M. SAJOUS, M. D., and One Hundred Associate Editors, Assisted by Corresponding Editors, Collaborators, and Correspondents. Illustrated with chromolithographs, engravings, and maps. Vol. VI. Philadelphia, New York, Chicago: F. A. Davis Co., 1901.

This imposing volume of 1043 pages is a fitting conclusion to the present series of this fine work. We entirely agree with the editor in his claim that all the promises made in the prospectus have been faithfully carried out, and as the result we have six handsome books, which are models of the publisher's handiwork in paper, presswork, and binding, and which constitute in themselves a good working library for the general practitioner.

The plan from the first has been to crowd much into comparatively little space by eliminating the old trite descriptions of disease which are common to most medical works, by taking it for granted that the physician is familiar with the elementary facts upon which his professional labors are based, and by inserting in their stead the latest technique, pathology, therapeutic measures, operations and discoveries of the best men in all specialties right up to the end of the nineteenth century—a thing which has never before been attempted on such a scale and which has been successfully accomplished.

Among other interesting articles we note "Diseases of the

Spinal Cord," by Pritchard, "Diseases and Injuries of the Cord," by Sayre, "Wounds and Injuries of the Head, with Intracranial Surgery."

An excellent cross index for the six volumes occupies 100 pages, adding much to the value of the work. DEADY.

MANUAL OF DISEASES OF THE EYE, for Students and General Practitioners. With 275 original illustrations, including 36 colored figures. By CHARLES H. MAY, M. D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Second Edition Revised. New York: William Wood & Co., 1901. Pp. 408.

The first edition we noticed in our January number of this year (p. 48). It is gratifying to the author that the first edition was exhausted in eight months; the size of that edition is, however, left to our imagination. "Each page has been carefully examined and a number of alterations made . . . especially in . . . ocular therapeutics." Adrenalin chloride and protargol are treated of, but we find no mention of chloretone. In speaking of the perimetric field of vision no mention is made of noting the size of the pupil, and 10 mm. square is the size recommended for the test object; 5 mm. is a preferable size, especially in locating scotomata. Every field of vision should be taken with as large a pupil as possible without using a mydriatic; its report should always be accompanied with a note as to whether the pupil is small, medium, or large, as well as mention of the size of the test object, and the radius of the perimeter.

This is a handy book for the general practitioner, gotten up in Wood's usual good style. A number of the woodcuts, however, are a little crude. J. L. M.

THE MEDICAL DIRECTORY OF NEW YORK, NEW JERSEY, and CONNECTICUT. Published by the New York State Medical Association. Volume III., 1901. Pp. 914. Cloth, \$2.50, to non-members of the New York State Medical Association.

A handy directory, larger and covering more ground than its senior by ten years, the County Society's excellent Medical Directory of the City of New York. A full index and pages varying in color render it easy to find the desired information. This year the names of legally registered physicians are pub-

lished without regard to school; the medical laws of the three States; summer residences; street lists and street directories of Manhattan and Brooklyn; an alphabetical list of all the physicians of New York State; the membership lists of the State and County Medical Associations; data of the old-school societies and institutions, etc.

THE OPHTHALMOSCOPE, A Manual for Students, by GUSTAVUS HARTRIDGE, F. R. C. S., Surgeon to the Royal Westminster Ophthalmic Hospital; Ophthalmic Surgeon and Lecturer on Ophthalmic Surgery to the Westminster Hospital; Ophthalmic Surgeon to St. Bartholomew's Hospital, Chatham; Consulting Ophthalmic Surgeon to St. George's Dispensary, Hanover Square. With 65 illustrations and 4 plates. Fourth Edition. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1901. Printed in Great Britain. Pp. 153. Cloth, \$1.50.

This, the fourth, edition in ten years has been thoroughly revised and a few additions made. A clearly written, well bound and printed book of convenient size for the overcoat pocket; the illustrations are good.

HAY FEVER AND CATARRH OF HEAD AND NOSE, with their Preventive and Curative Treatment. By E. B. FANNING, M. D. Philadelphia: Boericke & Tafel, 1901. Pp. 170. Cloth, 75 cents.

A well-printed and bound (of course) little monograph not worth the pains put on it by the publishers. The author concludes that the cause of hay fever is "an acid in the secretions, and not the nerves." Later he says "acid in the blood," and believes himself cured because the past season his attack only threatened but did not set in, although on several previous occasions, at intervals, he had believed himself cured—only for the time, however, as it proved. He tells us that "we must keep in mind that there are acids of one kind or another circulating in our blood more or less of the time." The indications for remedies may be found in other works, if not, we can hardly be expected to have confidence in them.

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